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Observations on Three Distinctive Conditions

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I.

Individual variations and tissue reactions

ONE of the first things I noticed when I began the practice of osteopathy was the different way in which patients of different types reacted to treatment. It is quite true in treatment, as well as in diet, that "What is one man's meat is another man's poison."

From the standpoint of an osteopathic diagnosis and treatment, two cases are never alike, and the same case is never the same twice. That fact alone necessitates a most careful diagnosis at each visit, and makes osteopathy difficult to practice scientifically. Then the added facts that the nervous reaction of one case differs from the nervous reaction of another, just as much as the patients differ in type, and that they react to the same treatment differently, makes osteopathy a particularly difficult system of therapy to practice scientifically. It has often occurred to me that I could understand a person's disposition better after having given him a few treatments than to know the individual in a social way for years. Certain patients respond to treatment best if they are handled roughly, some firmly but gently, others gently, some must be coaxed to relax, a few must be scolded, a number must keep their mind on the treatment in order to relax, and some must keep their mind off the treatment or they resist everything that is done for them.

If various nervous reactions and tissue conditions are understood and kept in mind, there is no excuse for patients making such remarks as: "That treatment almost killed me;" "I am so sore that I do not believe I can take a treatment today;" "I was so nervous that I could not sleep after that treatment;" "I was completely exhausted," etc. People are much alike mechanically and the same principles of mechanics as applied in technique can be applied in very much the same way to things that are similar in similar cases; but the irritability of nervous systems differs greatly, and the principles must be applied not only in accordance with the individual nervous system, but in accordance with the condition of that nervous system at that particular time. The operator must absolutely dominate the patient's nervous system during the treatment if the maximum amount of good is to be accomplished. Some patients have not enough mentality to distract the flow of nervous energy away from the part under treatment by whatever cerebration they may be able to carry on while they are being treated; but most patients should keep their mind on the

treatment and by all means the doctor should.

Perhaps the three greatest ills that human flesh suffers from are of mental, mechanical and chemical origin. Mental states produce chemical reactions, and chemical reactions produce mechanical disturbances, which in turn produce reactions that produce mental reactions, etc. Or it may be arranged in any other combination. We have studied the mental and mechanical conditions pretty carefully, but have neglected to study out and classify the symptoms of certain chemical reactions as much as we might.

The osteopathic physician has a great advantage over physicians of other schools in diagnosis, because as soon as the osteopath places his hands on the patient's back, he observes the tone of the tissues. It is necessary to be familiar with the normal tone to be able to recognize the abnormal.

There are, of course, a great many subluxations that are primarily traumatic, that have but little change about them, and these subluxations, if they are not very marked, usually do not produce much remote trouble and usually respond quickly to treatment. But when there is a general toxic condition present, the character of the tissue change about the subluxations and remote from the subluxations will vary according to the character of the toxin. Both the mechanical factor and the toxic factor are often present. Remove either and there will not be enough irritation to rise to a level of conscious pain, but in order to permanently cure the trouble both factors should be diagnosed and removed.

There are as many abnormal tissue conditions as there are different irritants, and the character of these tissue conditions is so different from anything else that I have ever seen described that I have never made much of a success of transferring my impression of these conditions to others. I am of the opinion, however, that this can be and must be done.

Reflex irritations are much like normal muscular contractions. They are not difficult to remove but recur. They are also purely local.

Fatigue toxins do not cause an irritation when present in small quantities, but produce an atonic effect on the muscles. If they are present in large quantities, however, they become irritating, but do not produce much thickening. This condition responds quickly to treatment.

Intestinal toxins produce more of a reaction than the fatigue toxins. There is a higher tone of contraction and more of a general fibrous thickening, especially if the case is of long standing.

The toxin that is most interesting and produces the most definite reaction of the common ones is the streptococcus infection that we find in teeth abscesses, tonsils, sinuses, etc. The nerves, as well as the muscles, are sensitive to this toxin. The muscles have a very characteristic feel. They feel rubbery, that is, like rubber that is not on much of a tension, and they feel swollen. There is also considerable tenderness, and the muscular condition does not respond readily to treatment and recurs quickly. With a little study one can make a very definite diagnosis of this infection by the feel of the muscles, even where X-rays or other methods of diagnosis have failed. Then it is necessary to keep right after it until the focus of infection is located.

Every osteopathic physician is familiar with the feel of the tissues in a congestive cold, and can recognize the difference between chilled muscles and a so-called cold from infection. Everyone is familiar too with the peculiar feel of the tissues over a pneumonic lung. There was a very characteristic feel to the tissues of a patient afflicted with the "flu." It was a very low grade of contraction, almost putty-like.

As I said before, I have never been very successful in conveying my idea of these various tissue reactions to others, partly, I suppose, because I have not a perfect mental conception of them myself, and partly because I know of nothing to compare them to, but I do know that different toxins produce different mechanical reactions, and that these tissues under these different conditions have as different and definite feel to the hand that is trained in these matters as the various fabrics—wool, cotton, silk and their various mixtures—have to the hand that is familiar with them.

II.

Unerupted third molars

Much has been written in the medical and dental journals about unerupted third molars, or wisdom teeth, but I do not recall

having seen anything written from an osteopathic standpoint.

I am of the opinion that they are often overlooked. They are most apt to be overlooked by the osteopathic physician because our treatment removes the reflex irritation and the remote symptoms often disappear for a time and we think we have cured the case, but in time the symptoms usually recur.

Fig. I.

An unerupted third molar that is not impacted against the second molar does not produce any symptoms, but an impacted unerupted third molar sets up a reflex irritation that produces a very definite series of cervical subluxations, with a chain of symptoms following that are not always alike, but that are somewhat similar.

The subluxations are as follows: Where there is a third molar impact on one side only, there is a marked contracture at the second-third cervical articulation on the side

Fig. II.

of the tooth. The articular facets are tightly approximated, the second slips slightly to the opposite side and the cervical is concave on that side. The greatest amount of muscular thickening is on the opposite, the convex side as usual. The occiput is side bent on the atlas to the opposite side and locked so that the mastoid and transverse process of the atlas are separated on the side of the impacted tooth and closely approximated on the opposite side. I believe this occipital subluxation is compensation for the second-third cervical, as I believe most occipital-atlas subluxations are.

Some five or six cases I recall in which I suspected just from the picture in the neck an impacted third molar. I do not mean to convey the idea that this group of subluxations is always caused by impacted third molars, but if this group of subluxations exists, it is well to find out if the molars have erupted, and if they have not to have an X-ray made at once.

It has seemed, according to my limited observations, that unerupted third molars run in families. One of my first cases was that of a man 50 years old who gave a history of a stiff neck of years standing, gradually growing worse, and for two years he had been suffering with a herpes over the posterior auricular and great occipital nerves on both sides, but worse on the left. He came to me after having exhausted the best of the so-called regular treatment. I

Fig. III.

did not make very good progress and asked him to have an X-ray made of his teeth. He refused, saying that he had had that done, and that they were all right. Finally I insisted, and the X-ray revealed badly impacted third molars on both sides. After these were removed he made a very good recovery.

The worst case of migrain headaches I ever saw was cured by removing an impacted third molar and correcting the secondary subluxations.

A woman fifty two years old, whom I had treated occasionally for years, had a nervous condition in her left eye and a tension in the back of her head on the left side. The treatment always relieved her, but the subluxations recurred. I got the idea that all her third molars had been extracted from what she had said, but found

an unerupted third on that side by chance when I had her other teeth X-rayed. When this was extracted her subluxations remained corrected, her eye tension disappeared, and the congestion in the back of her head left. Her general health improved greatly also.

A young woman twenty-six came to us suffering with nervous exhaustion, almost melancholia, who said: "I feel like my brain was in a vice." We found she had two unerupted third molars, and her symptoms cleared up quickly when they were removed.

Fig. IV.

The above are a few of the most interesting of this type of cases that we have had, and are varied long enough to give a general idea of what may be expected when the wisdom teeth do not come through.

To have all unerupted third molars extracted, especially if the X-ray shows them to be impacted, I believe is a good rule to follow.

III.

An Anteriorly Rotated innominate often the cause of knee trouble

All knee conditions are not secondary to innominate trouble, but so many are that when knee trouble exists one naturally looks to the innominate first, and in a large percentage of cases finds an anteriorly rotated innominate on the side affected.

Why an anteriorly rotated innominate? Because when the innominate rotates anteriorly it puts the pull on the "ham string" muscles, which results in an increased tension on the knee joint, a thickening and tension of the popliteal tissues, an interference with the circulation to the knee, and especially the drainage from the knee.

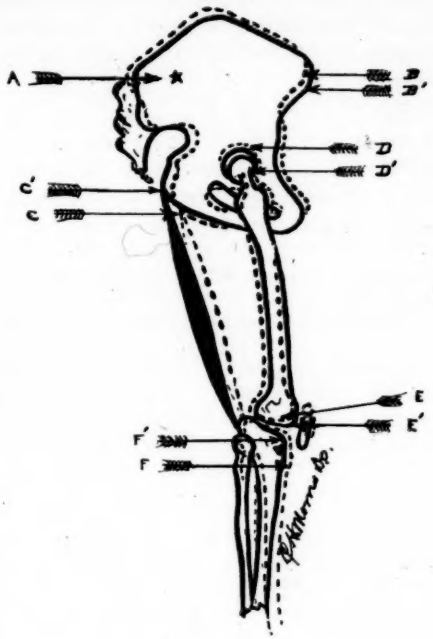
There are many types of anterior innominates, which vary according to the peculiarity of the sacro-iliac joint and the direction of the force when the subluxation was produced. But the particular variety or type of anterior rotation that causes knee trouble seems to be fairly, if not entirely, constant; and, I might add, that for me, at least, it is by far the hardest of all innominate subluxations to correct. In studying the various sacro-iliac joints on the skeleton, a great variation in the roughness of the articular surfaces will be observed, some are fairly smooth, some very rough. A vast difference often exists in the two joints of the same individual. It is my opinion in this particular type of subluxations, that the elevations and depressions on the ilium and sacrum are quite sharp and deep, at the posterior part of the articulation, so that when the joint is once separated and the rotation occurs, these rough surfaces become tightly fixed in their new position and are very hard to dislodge.

The point of fixation and axis of rotation in this particular type of subluxation is at or near the lowest or most posterior part of the articulation. The posterior spine of the ilium moves upward and backward, in relation to the sacrum, and locks at that particular spot, the balance of the joint remaining fairly free. This innominate rotation moves the tuberosity of the ischium, the origin of the "ham string" upward and backward, thus increasing the distance from their origin to their insertion, and putting an abnormal tension on these muscles. The natural relief for these muscles is in flexing the knee, but when this subluxation exists there is less relief than normal by this action, because of this constant tension on the ham strings.

The result of this tension on the knee joint is not only to flex the joint, but to produce a strain in the joint, and the tendency to subluxation of the joint with the tibial surface drawn backward and the femoral surface forward, and when the knee is forcibly extended for the two surfaces to be forced too tightly together. This interferes with the circulation, produces congestions, disturbs nutrition and predisposes to infection.

This innominate lesion is often produced by an injury which at the moment seems to be entirely localized at the knee, such as a fall, striking on the knee, attempting to stop a toboggan while sitting upright, with the legs directed forward, or simply by a misstep that twists the knee. Knee strains

SPECIAL R. R. RATES TO CLEVELAND MEETING, JULY 25-29



usually repair quickly if there is no innominate involvement.

The dotted lines in the diagram represent the normal relative positions of the innominate, femur and tibia; the positive, or heavy lines, represent the relative position of these bones when the innominate is subluxated anteriorly as described above. If the innominate rotates, as described above, the anterior superior spine will move from its normal position at "B" to B prime. This throws the acetabulum from the normal position of D to D prime, and the femur is thrown downward from E to E prime; at the same time the anterior superior spine and the acetabulum have traveled downward, the tuberosity of the ischium has traveled backward and upward. The acetabulum shoves the femur down, and the elevation of the ischium tenses the hamstrings and throws the tibia up and back from F to F prime. The tendency then is not only for the femur and tibia to be jammed into each other, but for the femur to slip forward and the tibia to be pulled backward, with the nutritive changes taking place in the knee joint as described above.

27 East Monroe Street

Diagnosis and Treatment of Gastric Ulcer

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GASTRIC ulcer is not a disease to be diagnosed and treated by the specialist alone, every practician should become familiar with it, and with intelligent care a large majority of these cases can be cured without operation. On the other hand failure to correctly diagnose them, and treating them as acute or chronic indigestion over periods of months and years may lead to such serious consequences as perforation and malignancy. Statistics show that gastric ulcer is far more prevalent than is supposed by the casual observer. "In the combined statistics of 59,450 autopsies of various series, evidences of healed or unhealed ulcer were observed in 4 per cent."—Bassler.

The reason for this is that peptic ulcer may present very definite symptoms which are readily interpreted, or they may be so atypical as to make definite diagnosis impossible. Like all gastro-intestinal diseases, many of the symptoms are easily confused with so-called indigestion or "stomach trouble" and no doubt many ulcer cases are cured without a correct diagnosis having been made.

Causes

One characteristic of gastric and duodenal ulcer is, that it occurs only where the mucous membrane is subject to the influence of hydro-chloric acid and pepsin—lower end of esophagus, stomach, and first

part of duodenum. Similar ulcers are often found in the sigmoid and rectum where the feces often become acid due to bacterial action, or on account of slow movement, hydrochloric acid and pepsin which may have escaped neutralization in the duodenum may attack the mucosa.

A brief review of the applied anatomy of the stomach may make clear the mechanism by which ulceration is brought about, and may convince some of our critics that osteopathic reasoning is in reality "reasoning," after all.

The stomach is supplied by the vagus and the dorsal sympathetic. Langley has shown that the autonomic nerve supply is derived from three sources: (1) The bulbar autonomic division of the vagus, distributed to the walls of the gut from the mouth to the descending colon; (2) From the sympathetic division, by the splanchnics, which supply the stomach, small intestine and the greater part of the large intestine; (3) From the sacral autonomic division which supplies the descending colon and rectum.

The close interweaving of this nerve supply through cerebro-spinal nerves and lateral chain of ganglia, plexuses, great and small, and intrinsic ganglia and plexuses in the walls of the tube, explains why irritation at many and far distant parts is so readily reflected to the stomach.

Cervical, clavicular and *upper dorsal lesions* acting through the vagus bring about hypermotility and hypersecretion, continued over a long period of time to the point of exhaustion, resulting in atony and achylia.

Middle dorsal lesions (6th to 10th) through sympathetic irritation cause pyloro-spasm, retention, reduced motility, hypochlorhydria, and reduced secretion. If long continued to the point of exhaustion the condition will result in paralysis of the smooth muscles, pyloric insufficiency, hypersecretion, congestion, and gastritis.

It will be seen from the above that the vagus and splanchnics are antagonistic in matters of vaso-motion and viscero-motion. Lesions of the vagus result in vaso-dilation of arteries, veins and lymphatics with hyperemia and venous and lymphatic stasis, with hypersecretion of mucus. Lesions of the splanchnics result in vaso-constriction of arteries, veins and lymphatics with lessened secretion of mucus.

Gastric ulceration is a matter of *self-digestion*. Is there a more logical explanation for self-digestion than the *inaction* of the *autoprotective force* brought about by interference with normal circulation of arterial and venous blood and lymph and the resulting interference with secretion?

Probable secondary causes of gastric ulcer are:

1—Embolism of an artery (gastric arteries are terminal). These emboli are supposed to be caused by toxic and infectious agencies which enter the circulation, as sometimes occur in pyemia and large burns of the skin.

2—While hydrochloric acid associated with pepsin seems to be an important factor, it is doubtful whether it can attack the mucosa without there being a previous abrasion or other injury. It is said that a normal secretion of mucus is nature's protection against self-digestion. Lack of secretion of mucus brought about by spinal lesions, as stated above, predisposes to ulceration.

The swallowing of substances of a coarse or irritating nature, or those chemically corrosive, or extremely high temperature may so injure the mucous membrane as to permit an attack by H. C. Land pepsin. Certain occupations seem to and produce gastric ulcer, such as cobblers or others who in their work press various objects against the stomach. Sharp blows over the stomach have been followed by acute ulcer. A frequently associated condition is gastroptosis, which seems to be explained on the basis of narrowing of the blood vessels and their more ready occlusion. Of all the theories advanced, the lowering of vitality, due to lesions of the splanchnics and vagus nerves, remain the most logical.

Symptoms

The most characteristic symptom is pain, which in a typical case comes on at a regular time after taking food. It may be a half hour, an hour or two hours,

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and in case of duodenal ulcer may be as late as four hours. The distance beyond the cardia at which the ulcer is located seems to govern the time; also the time at which the secretion of hydrochloric acid reaches its height, which varies in different individuals.

The pain is due to free acidity (that which is not combined with the food) irritating the raw surface of the ulcer. Pain is often increased or lessened by posture. If turning on the left side gives relief, the ulcer is probably at the pylorus; if worse when standing than reclining the ulcer is probably on the greater curvature. The pain is usually localized by the patient, and pressure at the given spot increases the pain.

J. Mackenzie has proved conclusively, however, that viscera are not sensitive to pain, but that the pain of gastric ulcer, as well as all pain due to visceral disease, is in reality referred over the afferent sympathetic nerve to the spinal cord, setting up an "irritable focus" which is reflected to the adjacent cerebro-spinal nerve and thence to the skin and muscles of the abdomen, a viscero-motor and viscero-sensory reflex.

The characteristic, circumscribed, tender spot of gastric ulcer, then, is not over the site of the ulcer, but at the point where the corresponding spinal nerve supplies the abdominal wall. The upper part of the left rectus will usually be found contracted in cases of gastric ulcer. This is supplied by the 6th dorsal nerve. When the pain is very severe it may be referred to the adjacent segments of the cord and be manifest in the dorsal region anywhere from the 6th to the 12th dorsals on the left side.

At the height of pain vomiting may occur, due probably to pylorospasm resulting from high acidity. Vomiting always gives relief. The taking of protein food or alkali will usually relieve the pain of ulcer (hunger pain.) Ulcer patients are usually well nourished owing to the habit of relieving themselves by eating, or they may be thin due to their fear of food.

In acute ulcer frank blood may show in the vomit, and may be the first indication of trouble, whereas in the chronic type it may be occult, or occult blood may be found in the feces. The hemorrhage of ulcer, unlike that of cancer, is not constant.

Diagnosis

Diagnosis of duodenal as distinguished from gastric ulcer is made by finding the tender spot to the right and below the pylorus, the pain coming on three or four hours after taking food, the finding of blood in the feces (tarry stool) and not in the stomach contents. Repeated examinations may be necessary owing to the fact that hemorrhage is not constant.

Ulcer is differentiated from functional disorders by a history of *real pain* as distinguished from the vague disturbances of sensation often called pain by neurotic patients. Also its regular appearance in relation to food. The pain of "gastralgia" has no regular habit and is not influenced by food.

The gastric pain of gall bladder disease, which may be confused with gastric ulcer will be better understood when it is recalled that developmentally the liver and its appendages are an outgrowth of the digestive tube, and that the region in the cord from which the nerve supply passes, is practically the same as that of the stomach. As in stomach affections the reflex pain appears in the epigastrium, but in gall bladder affections it is more common on the right side, and the upper part of the right rectus will be found rigid. The pain also tends to spread lower down in the abdominal wall, and to the right shoulder through the phrenics connection with the 3rd, 4th, and 5th cervical.

The pain of gall bladder disease has no regular habit, and is not influenced by food or alkali. The gastric pain of chronic appendicitis is not influenced by food or alkali, and has no regular habit, as in ulcer.

Ulcer is to be distinguished from cancer by the age of the patient (in cancer usually over 40) with a previously good gastric history, except in cases where cancer has been grafted on to a chronic ulcer. In those cases a careful inquiry will bring out a characteristic ulcer history up to a certain time, when all symp-

toms change; pain becomes constant, is not relieved by food or alkali; vomit becomes dark in color and has a characteristic odor; appetite fails and signs of cachexia set in.

Gastric ulcer should be suspected in all cases of persistent gastric symptoms which are not readily relieved by treatment and regulation of diet, and in which there is found high acidity and continuous hypersecretion not accompanied by mucus. The X-ray and gastric analysis should never be neglected in all suspected cases, keeping in mind the possible injury from the stomach tube in a case of recent hemorrhage.

Treatment

Osteopathic treatment of gastric ulcer will be uniformally successful if we will analyze all of the factors entering into the problem. It is obvious that in order to heal the ulcer we must remove all factors which interfere in any way with nutrition. Then give the stomach as near absolute rest as possible while at the same time build up the nutrition by a generous but well chosen diet. When acute hemorrhage has recently occurred, complete rest in bed, with a trained nurse in attendance, is the first indication. Complete rest of the stomach, all nourishment being given by nutrient enema. An ice bag is to be placed over the stomach and removed every three or four hours to allow surface circulation to react. Warm applications should not be used while there is any marked bleeding.

The following diet will be found best during the first week. 7 A. M.—A half glass of cooked milk, with the leathery substance which rises to the top removed, and the yolk of one egg stirred into it and sweetened, if desired; taken luke warm or cool, but never ice cold. This amount to be increased on the second day to three-fourths of a glass, and on the third to a full glass, which is to be continued for a week. If the milk produces diarrhea, add two tablespoonfuls of lime water to each portion. 9 A. M.—A saucer full of gelatin (Knox's or Crystal Rock) with two tablespoonfuls of cream and a teaspoonful of sugar. 12 M.—A half to full glass of milk prepared as at 7 A. M. 3 P. M.—A saucer full of gelatin, with cream (medium) and sugars as at 9 A. M. 6 P. M.—A half to whole glass of milk, as before, with one egg stirred in and sweetened. The egg yolks at 7 A. M. and 6 P. M. are to be increased until six are taken daily at the end of the week. 8 P. M.—A half to a full glass of milk.

The whites of the eggs are to be stirred up in water in the proportion of a white to a glass of water, 4 teaspoonfuls of sugar to be added to every glass, and only this to be taken by the patient when thirsty. If the bowels do not move, no laxative can be taken, but an injection of warm water or a little soap may be employed. If much discomfort is produced by the food, a hot compress must be laid over the stomach if marked bleeding has stopped.

During the second week the diet should remain much the same except for the addition of one or two pieces of zweiback three times a day.

During the third week if pain and blood in the feces are lessening we may add soft well cooked cereal like cream of wheat, cocoa, puree of split pea made with cream. Fifth week add minced chicken, coddled egg, *boiled* beef or lamb put through a meat grinder, soft vegetables such as chopped spinach, squash and mashed or baked potatoes with liberal quantities of butter. During and after the sixth week we may add vegetables which can be served in puree form, fresh fish, oysters, apple sauce inside of a baked apple, prune whip, custard, junket, corn starch pudding.

At this time also if all goes well the patient may sit up in bed and gradually move about, being careful to avoid all sudden movements which would put a strain on the epigastric region. If necessary we may also increase our manipulative treatment at this time.

The patient must be warned against the use of any article of diet which will be chemically or mechanically irritating to the stomach, for a period of months, and an examination of feces should be made from time to time to make sure of no return of hemorrhage.

Avoid: Grape fruit, Coffee, Salt meat, salt fish, pork, veal, sausage, gravies, salmon· lobster, shrimp, duck, hashes, stews, and dishes made with spices, all fried foods, pastry in any form, smoked, pickled, or potted preparations.

Osteopathic adjustment should be continued if any lesions persist after the ulcer has healed. Orificial (osteopathic) lesions must be examined and corrected for they may through reflex action, bring about the same gastric anemia as spinal lesions through direct anatomical connection.

Surgery

While a majority of gastric ulcers can be healed through the above methods, it is argued by many surgeons that inasmuch as every ulcer cicatrix is a potential carcinoma which may develop at the cancer age, it is good practice to incise all ulcers. While this may be good reasoning when ulcers are treated by ordinary methods, it is our belief that where osteopathic corrective work is done thoroughly, this danger is reduced to a minimum.

All cases of ulcer should be examined for orificial lesions, and removed where found, for any irritation which saps the vitality of the sympathetic nervous system will predispose to ulcer.

1813 PINE STREET.

Applied Anatomy of the Lymphatics

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I.

OUTSIDE of surgical references very little has been written on this subject. The references found pertain to nodes being involved in cancerous and tubercular conditions, and the spreading of the disease to adjacent nodes and channels, but we have to deal in ordinary practice with nodular involvement relative to disorders not necessarily of a malignant or tubercular nature. The majority of systemic disturbances and organic involvements, from colds to fevers, have a bearing upon the lymphatic system, as it is quite impossible to consider any organic disturbance that does not include a lymphatic change.

Viewing the lymphatic system in its entirety, as a complete system within itself, we may be surprised when we recall its important relationship to almost every tissue and organ. Just for a moment separate, in your mind, this system from the vascular and see how complete it is: The part the lymphatic system plays in its close relationship to the tissues in nourishment, assimilation, secretion, and elimination or purification; the entrance of this system into the infective areas and the immediate activities of the nodes and channels whether a finger is cut or a heel bruised; the long-tinted lines on the arm when blood poison has started through an infected hand abrasion, the checking up and collecting of septic materials that help to prevent sudden poisoning; and, greatest of all, the necessity of perfect vascular normality to assist the lymphatics functioning better under stress.

The vaso-motor arrangement in relation to the nodes and large ducts and the nerve centres from which impulses come, are included in this picture of the complexity of this wonderful system.

We can but touch the bare outline in an article of this nature, but we hope within a few years to have worked out a more or less complete applied analysis of the

disturbance and relations of the lymphatic system to the muscles, ligaments and organs that are closely associated with them. In the head and neck alone there are numerous applied propositions that reveal lymphatic disorders, when we pause to think of the relations of the lymphatic nodes and channels, that become involved through lesions of an osseous nature. There are a few areas, but very few, that have no lymphatics. The lymphatic system if completely separated from the body would be an amazing spectacle.

Sensitive to a degree and carrying a diseased nodular infection ofttimes without necessarily enlargement of palpable significance, this system is more or less constantly charged with infectious material or septic poisoning. The function, in part, of this system is to purify or clarify the contents of its nodules, channels and ducts.

The enlarged nodes are often at a distance from the point of infected abrasion or tissue poisoning. The obstruction of the vascular system is but an occasion for lymphatic activity and nodular trapping. The unstable vaso-motors through lesions, congestion or thickened tissues, but throws upon the lymphatics burdened responsibilities. Organic irregularities simply cause this system to become more or less blocked and taxed from the points of infection to the termination of the ducts.

The regurgitations often referred to in gastric and other organic centres mean systemic symptoms and tissue derangements. Poisoning through the lymphatic system is as potent a factor as tissue poisoning through an abcess.

In previous articles we have pointed out the value of associating enlarged nodes, through palpation, with adjacent or even distant sources of tissue or organic infection. The blisters on the heels, or soft corns, and inter-phalangeal abrasions invariably cause popliteal lymphatic enlargement usually with tenderness. Sometimes even the inguinal glands are noticeably involved, as careful palpation reveals.

We used to consider femoral and inguinal nodular enlargements due to pelvic congestion or venereal troubles, but when we remember that this region is the drainage point for all points below, we have to admit the possibility of pedal infection involving these glands.

Likewise, in hand or finger abrasions with infection we may notice a glandular involvement of the axillary nodes and in some instances cervical. This may arouse suspicion regarding the mammary region, but not necessarily, although a secondary disturbance may involve the pectoral region. When the axillary nodes are readily palpable it will be well to examine each finger and thumb around the nail and its matrix; also between the fingers to see if anything from a cuticle abrasion to interdigital cracks are present in the skin.

Any source of infection should be handled immediately to prevent strain upon the lymphatic system that is usually already burdened, in the ordinary system.

Few people are in such good health that they have normal lymphatic channels and lymphatic fluid. Every abrasion of the skin, every abcessed tooth, every diseased tonsil, sluggish organ and congested area means a more or less irritated and overburdened lymphatic stream. Minimize this strain and teach patients the importance of keeping the skin free from abrasions.

Many a system has been taxed by repeated manicures when a careless operator has left the cuticle bleeding or raw. We have all seen cases where the fingers were a bit swollen and angry looking from too close cutting of the cuticle or the tearing out of a "hang nail." Slivers allowed to fester tax the lymphatic system in that region. Absorption following abrasions is always constant and present, and a cat or dog scratch may show up at distant nodes and cause a systemic poisoning that may produce anorexia or nausea.

There are no such things as trifles in the way of abrasions. Septic poisoning even in a small degree may follow. Some

persons are heedless to abrasions and only laugh at them and give them no attention. Little has been written upon this subject for the lay mind and therefore a lot of systemic disorders have gone by unnoticed. It is only when a touch of blood poison is noticed that people begin to think of the seriousness of an infected abrasion. To my mind it is most significant if the body is to be kept up to a normal standard.

Fortunately gum boils are no longer laughed at or scorned but people have their teeth X-rayed, thanks to progressive dentists and physicians.

In future articles we intend taking up the following applied references: (1) the head and neck; (2) the region of the intercostals and spinal cord; and (3) the abdominal and pelvic regions. We hope to illustrate these articles with some original drawings.

12 RICHMOND STREET EAST.

Tonsils and Voice

J. DEASON, M.S. D.O., Chicago

THE past three or four years have offered an unusual opportunity for the study of the problem of the relation of tonsils and voice and I have endeavored to collect some unbiased data ranging from the beginners in voice study to those who rank among the highest of their profession of opera and concert singers. Conclusions are as follows:

1. In beginners, which term includes all those who have not yet developed a reputation, I would unhesitatingly advise tonsillectomy in every case in which the tonsils give occasional trouble or in those cases in which an examination reveals a chronic infection of one or more of the virulent, pathogenic organisms, because first, if this is not done, these singers will frequently meet with more or less serious trouble and second, because tonsillectomy when properly done, actually improves rather than impairs the voice.

As evidence of the first statement, we have observed yearly for several years that certain concert and opera singers meet with serious difficulty and are frequently impelled to cancel important contracts because of colds, sore throat and huskiness resulting from bad tonsils. As evidence of the second statement, I have records of twenty cases, students of the best voice teachers in this city in which tonsillectomy did not impair the voice in any case but resulted in definite improvement in sixty per cent, besides rendering them free from their occasional colds and huskiness.

Submucous corrections of thickened or deflected septums when properly done, greatly improve nasal resonance and frequently relieve nasopharyngeal catarrh which so commonly affects the voice.

In tonsillectomy done for the improvement of voice, the technique is very important. The entire plica is stripped back over the tonsil and the tonsil is enucleated by means of the Ruddy blunt dissector and the cushion of the index finger. The plica is cautiously folded over the pillars to produce smooth, even surfaces. The after treatment consists of osteopathic corrective work, irrigation to prevent extension of the infection and inflammation and thorough digital treatment to properly form the pharyngeal walls and to prevent the formation of adhesions. The after treatment is very essential and requires from three to six weeks, to accomplish the best results. Exercises (pharyngeal gymnastics) for the muscles of the soft palate and pharynx also help greatly in producing the best results.

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2. In professionals, those singers who have developed actual ability, the problem of tonsillectomy is not to be considered lightly, because these singers have "formed" their voice, and have adapted their entire voice producing mechanism according to their pharyngeal conditions and tonsillectomy is almost certain to so change the pharyngeal contour that the singer must be content to reform or readjust, which often requires many months to accomplish. In many cases of this type, however, it is advisable to do tonsillectomy because the final result is well worth the time lost in redeveloping the voice.

The non-surgical treatment in tonsil affections in singers is just as important as the surgical treatment and in many cases even more important. Most cases come to us because they have not been able to get results from other methods of treatment. The nature of treatment depends upon the pathology present, but most cases consist of acutely affected tonsils, with pharyngitis, laryngitis, and "cold in the head." In such cases, it is very important to give no, or at most very little, direct treatment to the tonsil. General treatment, and specific corrective treatment to the neck and thoracic region, clavicles and ribs included, and deep muscular relaxation under the angles of the jaws and the supra and infrahyoid region to increase the venous and lymphatic drainage, is very important. After the deep drainage treatment, Bier's hyperemic treatment, done by placing two pads of cotton over the jugulars low down on the neck and bandaging tightly until the entire head and neck is well flushed, aids in the relief of the pharyngeal inflammation. The Bier's hyperemic treatment, done by laxing the soft structures of the anterior cervical region to increase drainage.

After the tonsil and pharyngeal inflammation has entirely subsided, direct aspiration of the tonsil crypts, digital treatment (intrapharyngeal) of the upper and lower pharynx can be done without danger of increasing the inflammation and with beneficial results, but it must not be done too vigorously or too frequently unless the patient can afford to lose some time from engagements as the direct treatment while important, is likely to result in temporary voice impairment.

During the acute stage, it has been found best to give no direct treatment to any part of the nasopharyngeal tract. Unless there is a marked epipharyngeal or intranasal infection, irrigation is omitted. A gargle for the throat consisting of:

Tannic Acid	5%
Phenol	5%
Glycerine	45%
Alcohol	45%

Cinnamon and sassafras oils one drop each to the ounce of solution. A tablespoonful to a half glass of hot water.

This gargle is slightly anesthetic and astringent, thus relieving the irritation and is conducive to rest. It is also cleansing and possibly sufficiently germicidal to prevent extension of the infection.

After the inflammation has subsided, efficient exercises for strengthening the pharyngeal musculature are very helpful together with the treatment suggested above.

27 East Monroe Street.

Correction of Dorsal Lesions

Frank H. Smith

Indianapolis, Ind.

FIRST do some soft tissue work in order to relax the field. This can either be done by the McManis swinging leaf table; or with the patient on the face, using the upward and outward stretching movement; or with patient first on one side, then the other, and using the arm as a lever, grasping the muscles, and stretching them upward and outward.

Then with patient sitting with his back toward the operator, the operator sits on a stool, and allows the patient's weight to rest back against his shoulder, which leaves the patient's spine in a hyperextended position, suspended between the neck and shoulders (one point of support) and the hips resting on the table.

Having located the lesion, the operator directs his thrust against the spinous process of the lesioned vertebra from either side, according to which position the lesioned vertebra is in. Make your thrust with the heel of the hand toward the direction in which you wish the lesioned vertebra to go. I usually reinforce the thrusting hand by resting the elbow of the thrusting hand on the high thigh. With other hand around the patient's upper chest, ofttimes exerting some traction of the torso, will give added support to the patient and assist in releasing rigidness of the lesioned area.

This makes an easy method for the correction of these lesions, for the weight of the patient is jointly borne by the table and the operator's shoulder, while he is resting on the stool. And you can direct your force exactly at the point of lesion, and localize the movement to that point.

This method is effective for lesions throughout the dorsal region as high as the second, and it is very effective.

It will take a little practice to get this movement, but it is worth all the effort it costs in the effectiveness of the correction.

Upper Dorsal

I purposely stress the necessity of first getting soft tissue relaxation before attempting a bony lesion adjustment. This for two reasons: (1) It makes the correction itself easier, and (2) it gives the support necessary to the maintenance of the correction.

I formerly did very little preparatory work, and the result was more pain to the patient and greater liability of recurrence of the lesion. It savors more of the imitator's methods where he uses brute force to correct a lesion, and it may injure a patient, or get too great a reaction following correction.

So after relaxing the soft tissues in this region, place the patient on the side opposite the direction toward which the deviation occurs. Then reach under the head and neck of patient, reaching down with the hand to make a fixed point at the vertebra above the side of the spinous process, while at the same time bring the patient's head and neck upward, getting a distinct adjustment at the localized point of lesion. This method may be used for all the upper dorsal lesions above the fourth.

There has been much discussion of the value or harm of getting a "pop" in correcting a bony lesion. Personally, I am not working for the "pop", but when I get movement at a given joint I usually get a "pop," and it is simply evidence that I have secured a separation and movement at that point. One thing we are after is movement, so why object to the "pop" if it is simply an evidence of movement at the desired point? We must, however, localize our movements so that movement only takes places at the point of lesion.

MERCHANT'S NATIONAL BANK BLDG.

Diagnosis and Clinical Phenomena of Pregnancy

JOHN H. CRENSHAW, D.O.
St. Louis

(Continued from March Journal)

The Pelvis Considered from the Viewpoint of the obstetrician

IN speaking of the pelvis, I realize that I am not addressing a body of students only beginning the study of anatomy, and that the reader is well acquainted with the pelvis. But what I want you to see most clearly is the pelvis and the important part it plays in relation to child-birth. In other words, see it functioning, not as a plain piece of bone work, simply as an interesting structure, but as a frame work that actually has life to it, especially during every labor.

I want you to picture in your mind the true and false pelvis. Note the articulation at the symphysis. Picture clearly the sacro-iliac articulation. When these pictures all come clearly before your mind again draw on your imagination and picture the various positions a fetus may present itself in the pelvis for delivery.

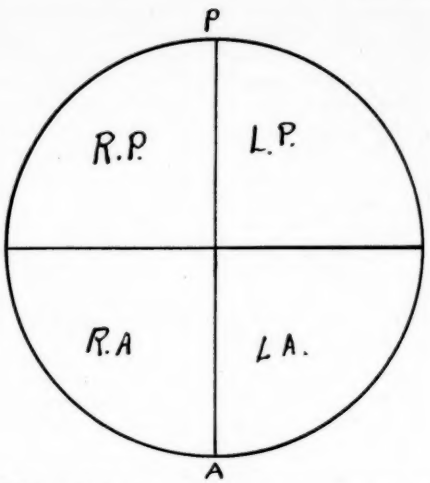
I want every reader so well acquainted with presentation that at a glance of the abbreviation or symbol representing a

certain presentation, he will at once have a perfectly clear picture of the subject. At my clinic I find many physicians who do not know the presentations and who can not even figure them out when given time to do so. Knowing there may be others in the field in a smiliar condition is my chief excuse for giving this series of articles. If you do not know presentation, you do not understand the basic mechanical elements of O.B. practice and should not attempt it until you do. When we speak of the presenting part of the fetus, we, mean the part which has descended farthest in the pelvis and which can be reached easiest with the examining finger. The presentation is named after the part presenting, for instance, a head presents or a breech presents; then we have either a head or breech presentation but either is subject to division under other headings.

Head presentation may be subdivided under occiput, brow and face. In this case, the head is the presenting part and the occiput, brow or face is termed the point of direction.

Numerous classifications of presentations have been made. In fact, the detail has been so great as to almost discourage a student of obstetrics in the very beginning. I have been disposed to change somewhat the classification and the naming of them. I have done this for the sake of brevity as well as to compel recollection. For instance the old L.O.A. being the left occiput anterior could easily be construed by the beginner as the occiput being subdivided right and left and the left portion being in the anterior quadrant of the pelvis. It doesn't mean anything of the sort; therefore it is confusing to the student or beginner in obstetrics.

Observe figure No. 1, and imagine the pelvis as a round opening; draw an imaginarly line transversely and another antero-posteriorly and you have divided this round opening into four parts or quadrants. Now name these parts R.P. (Right Posterior), R.A. (Right Anterior), L.P. (Left Posterior), L.A. (Left Anterior). These are the four parts to deal with and absolutely nothing else. Do not get a lot of confusing terms in your mind; get the quadrants clear. Now all you have to do is to put the presenting part in either one of these quadrants and you have your correct position. For instance, the occiput is in the left anterior quadrant. What have we? The commonest of all positions. Not the L.O.A. of the old writers, but an O.L.A. or occiput left anterior. If you will get these quadrants clear and put the presenting part in them you can keep yourself clear on presentation and position and never again become confused or allow anyone to confuse you in conversation. If it is clear to you, you can figure it out instantly and that is all there is to it. The O.L.A. and O.R.P. are cases which occur when the head occupies the right oblique diameter. When the head occupies the left oblique diameter, we have the O.L.P. and the O.R.A. By right and left oblique diameter, we mean the diameter obliquely from the sacro-iliac synchondrosis, either right or left.



This article represents brim of true pelvis, and the position of quadrants represent the position acquired by fetus in pelvis. Any of the fetal presentations can find position in one of these quadrants.

Why does the head usually present? One theory is gravity. Another is the theory of accommodation. This, however, has no special bearing here. Suffice it now to remember that the quadrants are the things to keep clearly and constantly before one. When figuring presentation, one can place any presenting part in

either quadrant and the situation at once becomes plain. Errors can not be made if this rule is firmly established and followed.

Descent of cord is not a presentation but a prolapse. When two or more parts such as head and a hand or a foot and hand come together, one is dealing with a pathology which defies classification.

The occiput, face, breech and shoulder are the presentations commonly dealt with, and of these we have four of each. Why? Because of the four divisions or quadrants of the pelvis. Name the presenting part, place in any quadrant and the diagnosis is clear, concise and complete.

LIBERTY HOSPITAL.

The Endocrine Brain

E. E. TUCKER, D.O., New York City

II

The Two Poles of Life

AS the most practical first step, according to the plan presented in the preceding chapter, we shall first lay the foundation for a broad understanding of the endocrines. There are two possible attitudes toward this subject; the rigid attitude of scientific skepticism, and the hopeful attitude and logic of the therapeutist. The one is apt to move too slow, the other too fast. It is hard to draw the line. As clinicians we are not permitted to wait for perfection, but must even do the best we can with the material at hand and such understanding of it as we can command. Perhaps a safe compromise is to present the hopeful aspect of the subject, and then check up the ideas presented as experience broadens. Accordingly we shall as we said, develop the logic of the subject. The checking up on this logic will be a matter of presentation of cases which will be a question of the patience of the editor and the perseverence of the reader.

There are two great unities between which we live, the unity of law in the universe without and the unity of life within. Between these two unities *all* of the organs of the body stand, holding as it were by one hand to each, adjusting themselves to both, specialized to both, true to both—the words mean in effect the same thing—so far as the resources of life permit; and adjusting them to each other to whatever degree is possible. Life progresses in proportion to this dual adjustment.

In one of these unities is their origin, the unity of life; in the other is their destiny, the unity of universal law. We hold to the one by the hand of reproduction, and to the other by the hand of expanding consciousness. The relation between these two hands is easy to picture—nature is trying always to pass things from the one hand to the other. Things from the unities of law, as she apprehends them, she tries to pass to the unity of life, and the unities of faculty comprised in it; blending them there as far as possible; and passing back improved faculties for the apprehension of more of the unities of law. This occurs in the individual development and in the racial evolution. Life is limited to the things it can thus pass back and forth.

In this way are formed two poles of life, two directions of movement and effort in it; the one we may call the reproductive pole and the other the conscious pole. These must not be identified with any particular organs, as the brain and the genitalia, for in fact every cell of the body is bi-polar in this sense, as is every organ, as well as the body as a whole. The reproductive organs and the brain are rather the focussing points of these polarities; and every cell and every organ contribute to and has a share in both. If one has a diseased stomach he thinks with a diseased stomach and the disordered stomach will reflect itself on the endocrine functions as well.

The endocrine system may be compared to a brain of the reproductive pole, related to it somewhat as the cerebral brain is to the conscious pole. Both brains in fact pervade the whole body, and have an equal share in the consciousness, as they have also shares, whether equal or not, in the reproductive activities; so that the differentiation serves only for the purpose of a clear development of the subject. The analogy has enough justifica-

tion, however, to make it well worth while tracing. For this purpose it is necessary first to trace the source of the intelligence of the brain, and its relation to the organs of the body; then to compare with this the similar development of the endocrine system.

Each organ, related to the two poles by either hand, is yet something in itself. In itself each one represents an adaptation to certain specific laws and forces of the external world, and to probably the same laws and forces within. We spoke of unities of law in nature, and unities of life within—the first of these we discover by scientific study; but life discovered them by experience long since. That is to say, under the myriad happenings of the day is an average of uniformity which represents the laws of those happenings. Adapting herself as she does to each of these happenings in a small way, she finds herself adapted in the long run to the average, that is to say to the laws, of those events in a large way. This statement is the outcome of the doctrine of evolution. These adaptations are the organs of the body. Thus the unities of law in the universe without become incorporated in the separate structures and organs of our bodies.

Insofar as these external laws are fixed and unchanging like the law of gravitation, will the resulting structures be fixed and stable, like the bones and the eye. Insofar as they may be changing, as the light of day and the dark of night, or as changing purpose requires, adaptation will the resulting structures be flexible like the joints between the bones, and the moving, focusing and curtaining of the eye. Insofar as they must be kept a unity will there be a co-ordinating mechanism.

A unity they must of course be. Unity refers to the unity of life within, which when it is destroyed means disease and death. The growth of life from simple to complex structures is a growth toward unity, not away from it. This is to be understood from understanding the true nature of growth. There is only one fundamental function underneath all the myriad phenomena of life, assuming different forms according to the different organs through which it acts, and that is the function of growth. Growth is not a matter of increase in size—that is the last end result, the ultimate effect, of the process. What is the process itself? It is essentially a purification. The sea water in freezing freezes as pure water. The ice particles select and adhere to other ice particles, selected for their similarity, their "class," and arranged in perfect order; freezing out the "impurities." The rose growing in a dung-hill does the same thing. Growth is a matter of selection, of selection by subject, thus creating unities with a central "theme" or subject; a matter of purification or refinement of subjects, and a liberation of purpose which is necessarily the master subject. Digestion and assimilation in animal life is the same process, forty times refined. The specializing (or one might say "purification") of bone from muscle, of liver from pancreas, etc., is nothing else than this process. The mental function of association by "similarity," which means by subject, is again the same fundamental process, whose finest expression is logic itself. All growth is this same process, a progression into deeper unity based on more intimate refinement; a process to which there is no end; each resultant of the process becoming an integrated organ with a single central purpose, whose outer aspect however reflects the whole as a drop of dew reflects the heavens.

It is external forces that chiefly dictate the subjects, or problems around which the integration or specialization takes place. It is internal forces which supply the motive, the other half of the process. From the interplay of these two forces were all of the organs and functions of life given to us. The cerebral brain is developed in connection with these external forces and unities, and is more mechanical in its functions. The endocrine brain was developed in connection with the internal motives, in relation that is with the process of refining, selection and order that we call growth, of which one

phase is reproduction. They are and always have been closely related, the endocrine functions being complemental to the mechanical functions of the cerebrum, and the nervous mechanisms complemental to the enzymes of the endocrine system.

Thus may be traced the origins of the two brains as the complemental halves of a whole; but not yet the source of the intelligence of them.

By this dual process nature has built a vast amount of intelligence into the fixed structures of the body—details of mechanical law. A vast amount of intelligence also is found in the movable parts—details of dynamic and other laws. These two in turn become the basis for the third step, the construction of a co-ordinating mechanism, the brain and nervous system. A vast amount of intelligence also is embodied in the structure of this system, details of laws of co-ordination, the technique of the brain function.

But the real brain intelligence is not in the structure of the brain. In regulating other parts of the body, the brain has practice in using—not certain organs and parts—they do not exist as such to the brain—but certain details of mechanical and dynamic law; it is as these that they exist to the brain. Having learned by experience to handle them, it finds itself possessed of other powers arising automatically out of that acquirement. For it is on the basis of that acquirement that it is able to classify, co-ordinate and use its experiences with the external world, where are only these same laws and no others—although in different forms and combinations.

This is the true origin of what we call our higher intelligence. The perspective it gives us is vast. The intelligence with which we now perceive beauty, order intelligence and law in the world around us is based on the mechanism of the body, and represents the distilled and triple distilled experiences of all of life for all of its millions of generations. So much for the origin of the faculties of the cerebrum and the conscious pole of life.

The dual process, however, remained dual, and caused progress in a dual direction, the first of which, leading to the evolution of the mechanical brain, Darwin traced in his study of evolution. But these various organs represent also another equally important path of evolution; they represent also the bio-chemic process of refinement by which the structures were first constructed and later reproduced. The first would have been absolutely meaningless without the second, which really should be rated as first; which represents the motive, the intensive aspect. If the result was specialized, the method and the motive was equally or more specialized. Evolution along this path lead to the endocrine brain. The organs of the body represent a thousand bio-chemic processes, bits of incorporated intelligence as important, as vast, in their field, as the levers and pulleys and valves of the mechanical body. By similar grades of refinement, by specializing first averages, then common denominators, then the laws behind the denominators and the purposes behind the laws, then the consciousness behind the purpose, nature finally produced the endocrine mechanism; related to these bio-chemic processes about as the cerebral brain is to the hands and fingers; related to the consciousness as intimately, or even more so, than is the mechanical brain; related to and acting on all organs no less than it; for the purpose of guiding them in their adjustment to their environment to no less a degree, and possibly a much greater degree, than the cephalic brain. Thus the two poles with the two brains. One could no more exist without the other than North without South.

This bi-polarity reaches back to the very beginnings of life; and not infrequently in dystrophies of one or another of these organs we come across phenomena that picture conditions of animal or even vegetable life; such as the seasonal variations of the pituitary and adrenal bodies; the hibernation of the bear; the sleepiness of the setting hen; the pigmentation, distribution of hair and alteration

SPECIAL R. R. RATES TO CLEVELAND MEETING, JULY 25-29

of disposition strongly reminiscent of various animal phases of evolution.

Reproduction has more than one aspect. It is first of all necessary for each individual to reproduce in himself or herself the full complement of the qualities and capacities of the race. This is the first phase, and occupies the time from conception to maturity. Over this aspect of reproduction the endocrine organs are discovered to have profound influence (1). There begins our practical use of the study for reading this evidence we read the state of endocrine balance in the individual. There is some evidence that even before birth they hold the maternal and the foetal organisms in close relation (2). After this first phase of reproduction is completed, then the same functions serve the second or sexual phase; and in ways that may be closely compared. They also interpret the sexual phases of reproduction to the intellectual faculties, i. e. to the external world, and *vice-versa;* that is, they interpret the motives of life to the environment and the environment to the motives. Each, therefore, may restrain or may stimulate the other. Each has in fact a profound influence on the other (3).

Illustrations of the influence of the endocrines on growth may be seen in akromegaly, cretinism, precocious puberty, etc.

An instance of the rapport between maternal and foetal organism are seen in those cases where the foetal internal secretion compensates for the mother's deficiency and keeps her well during the term of pregnancy.

As an illustration of the resemblance between the valency of an endocrine organ in the developmental phase and in the reproductive phase, we have the over growth of the body, in the former, and the overgrowth of the uterus or prostate in the latter, due to pituitary overfunction.

As to the stimulating or inhibiting valencies of the conscious and to reproductive poles on each other we have insanities and Freudian complexes.

Each endocrine organ may in an unbalanced state leave markings on the structure of the growing body during the developmental phase. This is because the valencies of the endocrines affect not so much static conditions as processes. They do not as a rule initiate processes, but influence them. While growth is still going on they influence growth. Now no two people have the same shaped nose, or eyes, or features generally, so no two have the same proportions and balance among their endocrines. There is no norm, no standardized balance, in the human race (which for many centuries has been cultivating flexibility rather than stability); so that practically everybody has endocrine markings (aside from and in addition to the natural variations). The value of these markings is this; that the imbalance which shows in the structure will appear also in the domain of function since the endocrines affect processes. But diseases also are processes, and highly vigorous ones; wherefore their imbalance shows with especial clearness there. Later on this imbalance will become more and more evident in the mind, which is of course the most active of all the processes in the body.

The value of this element in diagnosis and prognosis depends of course on the accuracy with which it can be read; but its importance must be apparent to all. As a consequence we observe in the masculine body more unity of movement and more power, in the female body more flexibility and grace.

The same contrast is to be observed in the psyche—his interests being centrifugal, her's centripetal. The contrasts in the diseases of the two sexes are an enlargement of this picture.

The difficulties of a therapy based on specific remedies must be apparent. The only perfect, in fact, the only tenable, therapy is one that aims to restore the functional integrity of the organism and each of its parts. The science of osteopathy is the only one that contemplates this principle. There is, however, a correspondence between the structure and appearance, and the type of diseases one is liable to, and the qualities of mentality one is likely to develop.

(Continued on page 507)

RESERVE JULY 25-29 FOR CLEVELAND A.O.A. MEETING

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IMPORTANCE OF MINUTIAE

The truly important part of osteopathic art depends upon the detection and interpretation of structural detail. This refers to pathogenetic factors as well as to the various mechanical complexes that make up no small portion of osteopathic pathology.

The history of osteopathy is not simply a story of the discovery of certain general principles and their subsequent universal application to bodily disorders. Instead, two features stand out most prominently:

(1) The detection of certain structural details, or expressions, or registrations, commonly found in similar diseases; the removal or readjustment of the same being followed by normalization. The first attempts were crude in comparison with the later precise and specific work. A typical illustration is that given by Dr. Still in his first osteopathic experience with dysentery. Results were secured, but the technique is in marked contrast with the skillfulness displayed after considerable experience and practice, when treatment was confined to the lumbar alignment alone. This is one of the landmarks of osteopathic progress, revealing the development of the art prior to the enunciation of general principles, which is typical of his first experiences. (It has been stressed by some that osteopathy's first work was in the field of chronic disorders. This is not true, for acute diseases, such as typhoid fever, pneumonia, malaria, the eruptive fevers, etc., received equal attention with the chronic ailments. But when the older practitioners went out to practice many of them did confine their work to office cases.)

The great point to remember is that Dr. Still was particularly concerned with the application of detailed applied anatomy. Each case presented a special and individual study. The minutiae of structure and its complex inter-relationship holds, in his opinion, the solution of the normalizing process. The detection of the minutiae, as revealed to the tactual sense, the early beginnings, the first irritating or inhibiting processes, however submerged or remote, is the great essential of successful practice. Herein is expressed individualization, which in turn demands creative effort, neutralizing imitation and routinism. Naturally basic to this are various general or universal principles. But general principles do not necessarily imply general measures of technique application. The one explains certain laws, but, of course, is no excuse for "general manipulation."

(2) The second feature of Dr. Still's work was his originality. He thoroughly believed in and practiced a definite initiative consonant with osteopathic science. In other words he was not authority-bound unless the reasoning was clear as to all details. And it is the very lack of details that has caused the downfall of many apparently consistent and promising practices. For this reason Dr. Still had unbounded faith in an individual's

brains provided they were unshackled of authority bias.

Of course these two features touch upon certain phases of Dr. Still's genius. But the important point to the osteopathic practitioner is the absolute necessity of his consistently detecting and developing detail. Structural minutiae and its relationship contains the only clue to osteopathic progress. The "find it" in each and every case is the ideal goal of attainment. The rest is, relatively, of minor consideration in so far as the actual portraying of skill is concerned. Potentially there is not a practitioner but has the capacity for important discoveries. His ability depends on his getting the viewpoint through clear observing of the relationship of minutiae. In health, the body is fully reparative. Wherein lies the blockage in every instance of ill health? This is the problem that constantly confronts us. Structural re-examining prior to each treatment, followed by pertinent application, will revolutionize one's practice.

THE CONCEPT

Consistent sustained effort is probably one of the most difficult things for a practitioner to achieve in his daily practice. The possession of a sound theoretical knowledge of osteopathy does not necessarily imply that one has either the skillfulness to apply the requisite art, or the good judgment to evaluate signs and symptoms, or the rigid discipline essential to investigate all details of a complex problem and carry forth a rounded-out plan of treatment. The main course of practical procedure may be clear enough, but a detail may be neglected or overlooked that distinctly changes or colors some indispensable factor of the problem. It is just as easy to drop into a deadly routinism of manipulative practice in the art as it is to keep on a plane of generalities in explaining theory. In either instance, the effort may lack sustaining power to the point that explanation does not explain or manipulation does not adjust. In other words, the very essence of the equation may be lacking.

Herein is probably often the practioner's greatest weakness, defective discipline. The remedy is evident. The white heat of thinking and doing is the only possible solution. Logical thinking and acting, embellished with the details that individualize a problem, will attain to results that are otherwise impossible to achieve. This implies that the correlation of detail gives both the color and key to the problem. Generalities, like "perfect circulation," "pure blood," "normal nervous equilibrium," "chemical coördination," are only landmarks that outline or sketch the course, which are applicable to the soil of infinite variety. The objective of detailed conditions of structure, function and chemistry may readily be lost sight of by simply noting the vista from the heights Not that general principles are dispensable, but instead the mechanisms that make up the totality both structurally and functionally, must be investigated and acted upon. This is the specific concept, individualization, that contains the magic key of practical solution.

It is true that one must observe the peaks, or a part of them, in perspective, such as, for examples, the healing power of nature and the importance of structural integrity, and be able to apply a skilled adjustment-technique, in order to competently practice his profession. But these are bare academic fundamentals. Applying this general concept specifically in every case is where the real effort begins.

True success demands osteopathic thinking and doing to such an extent that the actual subject becomes an indispensable part of his existence, not only coloring his hours of professional labor, but also his scientific reading and nature observation. Then, and then only, will a goodly portion of his life blood become thoroughly saturated with the osteopathic concept. That there is an osteopathic

philosophy as well as a science, it goes without saying. To attain to this is, in our estimation, a desideratum. Then will arise an urge that will fructify into comprehensive osteopathic seeing.

This is where the receptive student will gain so much through correct teaching of osteopathic applied anatomy and physiology. Detached facts and theories, data and ideas not osteopathically correlated, are relatively of little value compared with the same facts and possible theories interpreted and explained in detail in comport with the osteopathic concept, and then demonstrated clinically by the combined personal effort of teacher and student. This is the beginning of osteopathic education.

With this basic vantage point, the practitioner is so imbued with the definiteness, practicalness and comprehensiveness of the osteopathic concept that search for pathogenetic factors, interpretation of symptoms, and appreciation of physiologic mechanics will readily mean to him, in every case, a new problem to be solved; not an imitative plan of procedure, or formula, to be followed.

The world of the osteopathic concept is rich in possibilities. There is hardly a disease that does not present important phases demanding solution.

THE FEEL OF TISSUES

One important part of osteopathic education is the tactual. Without a thorough appreciation of the feel of tissues, an understanding of the manifold structural registrations, practically, pertaining to both health and disease is impossible. This is a practical portion of the concept that leads toward diagnostic and therapeutic efficiency. Tactual education is not a synonym of adjustment skill, though rarely will one be skilled in adjusting who does not have a keen tactual perception of the structural and functional expression of tissues. But one may educate these corpuscles to a high degree of tactual perception and still lack a necessary knowledge of adjustment mechanics for technique purposes. In other words, there are individuals who seem unable to acquire the necessary mechanical skill or ability, so essential to successful practice, and still they are capable of training the tactual corpuscles.

Surgeons, as a class, pay considerable attention to the feel of tissues. They thoroughly appreciate the many varieties and gradations of structure, size, consistency and tension. Every tissue in health or disorder registers in some such way the actual condition or state of its functional processes. To interpret the feel of tissue is one important method of diagnosis.

Probably, to the osteopath, noting the resistance of the interosseous tissues is the one method par excellence that reveals the status of joint functioning. Flexibility, resiliency, rigidness are terms that convey much information to the experienced practitioner. Of course, direction of tension or resistance, normal or abnormal, is of definite aid. Likewise, spastic tissues, contractures, indurations and many phases of pathologic processes often reveal conditions in no uncertain way. But it requires a keen tactual sense based on a knowledge of the normal, acquired by many actual experiences, in order to detect, appreciate and evaluate the many possible abnormalities.

Aside from various structural changes of tissues that may be noted, from tone and tension manifestations, infectious processes and growths, to actual displacements and deformities, there are circulatory and temperature distinctions that the student should carefully consider.

Then of no less importance than the diagnostic phase, is the therapeutic field of tactual expression. The feel of tissue prior to and during adjustment comprises an important part of successful osteopathic therapy. One method of preliminarily relaxing the field for adjusting operations is to put the tissues on an

inhibitory tension, exactly in accordance with and part of the first step of the selected method of adjustment. The point is to stop the procedure during this precise step, for a few seconds, being certain that tension is uniformly exerted, until one feels the tissues give or relax. For the first effect on the tissues of the preliminary step is a definite reaction by way of increased tension. Securing this preliminary relaxation, sensed through the tactual organs, lessens the force of the operation as well as the work of the operator.

All through the various steps of an adjusting operation, the educated sense of touch will give invaluable information. This is a detail that goes far toward success in technique. In fact, one that senses the various tones and tensions that arise through technique effort will in all probability have a definite idea of the underlying pathology and a thorough understanding of both physiologic and therapeutic mechanics.

Nothing will prove of greater value to the student in osteopathic therapeutics, and teach him to think osteopathically, than personal contact of his fingers underneath those of the instructor when demonstrating on the actual case. The teacher should remember that this education is a matter of daily work for months. The student at first has difficulty in detecting gross abnormalities, letting alone the finer shades of soft tissue changes and the far more delicate, but essential, tension releases during interosseous adjustment. Nothing will benefit the student more than this daily contact and discrimination pertaining to the feel of tissues.

THE REACTION

Intimately allied with the foregoing, Osteopathic Concept and the Feel of Tissues, is the ever present problem of Reaction. We refer to the physiological response of tissue and organ following the various adjustment phases of technique procedure. The correct interpretation of reaction depends upon a definite knowledge of the scientific concept of osteopathy and an educated tactual sense that is capable of evaluating the many finer shades of tissue signs and symptoms. This knowledge of tissue reaction constitutes no small portion of practical osteopathy, for skeletal registration, if rightly interpreted, gives distinct clues and a precise index of functional activity and structural status. There is no phase of osteopathy of greater practical import. A thorough drilling in its fundamentals was insisted upon by Dr. Still. The writer well recalls the many months that Dr. Still gave to this phase of the feel of tissues when personally teaching the students. The first weeks of daily effort seemed to portray the utter hopelessness of substantial attainment, and still on looking back, in perspective, it is evident that nothing else can be of greater concrete value in establishing and firmly fixing the scientific concept in one's mind than the educating of the tactual sense. To obtain an understanding of the osteopathic concept in the abstract is not difficult, for the fundamentals are clear-cut as all basic principles of science are readily understandable, but in order to become skilled in the art requires much persistent and consistent effort. And still efficiency can be attained only through mastery of the various technique phases.

In our opinion, this comprises one of the most difficult factors for solution that enters the field of osteopathic art. In one sense it is the capstone that reflects understanding and good judgment. Keen analysis of the patient's condition is demanded on the one hand, while on the other an equally appreciative summing up of temperament, sensitiveness of tissue and its vital response is imperative. There are so many factors that enter the problem of personality or individuality, from psychological behavior to structural flux and reaction, that unquestionably the best of practitioners of every school will make mistakes. The gamut of ailments

or conditions seem almost infinite, in gradations at least, many of which are more or less masked and all acting and reacting on both mind and body, that probably the real wonder is more legitimate mistakes than do occur are not made. Then confidence in both method and practitioner are not always readily obtained, but nevertheless the contrast of the present with that of two decades ago is marked. And it goes without saying that the reputation of osteopathy stands higher and on a firmer basis than the reputation of some of its practitioners; which is also true of any system of practice.

There are three factors pertaining to reaction, that is, the art side of it, that Dr. Still especially emphasized:

(1) *Specificity.* Now this does not mean being so adjustively specific that every apparent bony malalignment must be pounced upon and rammed home regardless of rhyme or reason. There are many tissues and organs other than bones that fulfill functions of the greatest import, and are equally subject to structural strain and stress, of functional abuse and disuse, as any other tissue and combined structure. Traumatic injury of interosseous tissue is neither the first nor the last word in osteopathic pathology, however important this role may be in the scheme of pathogenesis. And over-zealousness here may prove a stumbling block toward desired reaction results. Antecedent forces and environing influences are conditioning factors that enter profoundly into both external and internal adjustment of function, and, hence, equally into adjustment of structure. Interrelationship and general configuration and conformation exemplifies the working of many laws of the first order. Specificity of technique must observe such relationship of facts, for it is this very relationship upon which the law of technique-adjustment is founded. Hence, mere attention given to the isolated lesion without due regard for contingency is poor practice. Certainly, it does not necessarily represent art, even if there is a semblance of scientific support.

The really important point to consider is the totality of phenomena; this is the key of specificity. And the reaction response reflects in definite terms the normalizing effort, which should be anticipated and carefully noted. We are of the opinion that too often this reaction is neglected or overlooked. Nothing else will give one a greater insight into practical osteopathy and its comprehensiveness than due observance of reaction signs and symptoms. In fact, it is an exceedingly practical guide that points the way toward careful, scientific and guarded effort. For to a certain extent every case is a law unto itself, that is, within such bounds that the combination of antecedent factors portrays a complex of individualization. This seems to be a difficult thing for the student to practically grasp, and still it is of the very essence of successful practice.

(2) *Too severe treatment.* In order to treat just right, or correctly and sufficiently, in the individual case requires finesse and judgment of no mean order. This demands exceedingly good judgment, for there are innumerable factors and details that enter the equation. In fact, invariable good judgment seems to be an ideal, a goal that one is constantly attempting to approach, but too often falls short of attainment. Herein is best expressed the eternal creative work of osteopathic art. And a momentary letting down of the bars spells mussing, routinism, "manips," and what not.

It is usually far better to stop short of severity, although, of course, there are exceptions. Nature, as a rule, does not require much structural assistance, provided the assistance is structurally precise, correctly timed and then let alone. But, of course, the only way one can attain reasonable judgment is by the road of experience, though generally speaking, over-doing leads oftener to undesirable reactions than otherwise.

STORY OF QUARTER CENTURY, CLEVELAND, JULY 25-29

Again it is the feel of tissues and their physiological reaction that gives the clue to the class of work being done. Too severe treating is very apt to dull the finer shades of tactual interpretation. And it is the delicate vital expressions of reaction that many times prove diagnostically and therapeutically invaluable.

(3) *Too frequent treating.* It requires time for nature to repair an injury. To note some of the over-zealous or severe and frequent treating one might think that the physician is laboring under the idea that he is doing the repairing and healing. Many a time a "vacation" from treating has worked wonders, provided the treatment was correct, for the simple reason that nature has been given an opportunity to carry out the reparative processes.

The injury to the tissues and organs and their retarded normalizing effort is always evident, when too severe or too frequent treating has been indulged in, through untoward tension or exhaustion or irritation, which is expressed both bodily and mentally. The reaction elicited by the tactual expression alone is always noteworthy if one has the skill that he should possess.

All of this bears most definitely and practically upon the subject of reaction. A certain reaction is always desirable, even in some cases where there is a slight exacerbation of symptoms, e. g. a nephritis, a simple infection, etc., and the patient should be forewarned. But there are reactions, particularly in hypersensitive individuals, most notable where there is some endocrine upset, that are not desirable, although there are exceptions. For such reactions are often due to disregard of the constitutional make-up, or the character of the disorder, or the result of over-treatment, severe treatment, or too frequent adjustment, the last usually implying that the primary lesion has been overlooked. Myocarditis presents an excellent illustration where over-zealous work, the attempting to do too much at one treatment, may be fraught with serious results, while on the other hand, if careful work is performed with due regard to the pathology and the delicate nervous mechanism and particular attention to the reaction phenomena, brilliant results are frequently forthcoming. Some of the best results that the writer ever saw Dr. Still secure was in just such cases. But his admonition always was: Release the nerve force just a little at a time, that is, make only careful partial adjustment at one treatment in such cases in order to give nature an opportunity to keep pace commensurately with its normalizing processes or else irritation will follow in lieu of alleviation. And it is the skeletal tissue reaction as well as the visceral that gives a definite guide to technique.

The student should have it impressed upon him that man is *not* a machine or structure which demands only adjustment; but is instead a delicate and vital organism whose mental and bodily functions and structure are so interrelated and sensitive, representing an organic whole, and so conditioned from both within and without, that the skeletal registration and conditioning, although obeying certain principles of mechanics, expresses but one phase, however important, of life. If man was simply a machine, the conditioning would be only from without, but his being a vital organism there is the added conditioning from within which expresses through vital reactions exactly the difference between the finite and the infinite.

PIGMENTS OF THE BLOOD SERUM

The serum of the blood is, normally, a very pale straw-color. Under certain conditions, some of which have not yet been explained, the serum becomes very pale in tint, or much deeper yellow, or brownish, or greenish or pinkish, as the case may be. The source of these pigments, normal and abnormal, has long

been the subject of consideration in a number of laboratories.

Ordinary laboratory tests of the blood neglect this aspect; and this neglect is often a very serious one. The study of the serum, so far as pigments are concerned, need not be made a matter of great difficulty, so far as clinical evidence is desirable. No complicated apparatus is necessary. In its most simple use, the blood is taken into a small, thin glass bulb, such as is used for the fibrinolytic test. The blood is allowed to coagulate in this tube, and the serum to separate from the clot. The bulb is then wrapped in several layers of perfectly white filter paper and broken. The serum stains the paper; and, while still wet, the edge is touched with a drop of fuming nitrc acid, by means of a glass rod. The depth of the stain on the filter paper, and the depth of color of the serum while still in the bulb, show whether there is any abnormal pigmentation of the serum. (Normal blood must be used as a control, and it is wise to use at various times the blood from several different persons, all apparently healthy, in order to provide an average color-tint in this test.)

The nitric-acid-test, Gmelin reaction, gives a series of rainbow tints at the zone where acid meets serum. These colors should be distinct, though they are never, in blood, very heavily marked. Brownish tints should be disregarded, and only distinctly greenish, or yellowish-green, or distinct violet shades, are to be considered conclusive evidence of the presence of bile. Brownish and reddish tints may be due to hemoglobinemia, and to certain other pigments, rather than to bile.

More accurate methods require larger amounts of blood and chemically exact manipulations.

Traces of bile may occasionally be found in the serum of patients in whom no other evidence of jaundice is evident. Complexion, conjunctivae, mucous membranes, urine, all may appear normal, and yet the blood serum show persistent, though slight, cholemia. Incipient hepatic disease may thus be recognized; more often, the less serious disturbances of the liver may be recognized and properly treated. Sometimes the hepatic circulation or the flow of the bile may be disturbed by lesions of the vertebrae or the ribs, and the correction of these lesions may be followed by disappearance of the cholemia, increase in hemoglobin, and diminution of the symptoms due to the cholemia and anemia.

The presence of the bile pigments in the blood is probably usually associated with the bile salts, though these are less easily determined. The bile salts lower surface tensions, and in this way they must modify cellular metabolism, and the processes which depend upon surface tensions for their efficiency. Bile renders cholesterin more soluble, and this effect may be secured by extremely minute traces. Since the stroma of erythrocytes is chiefly composed of cholesterin, and since this same substance makes up a very considerable proportion of the stroma of all cells, it is evident that cholemia may be one important cause of persistent secondary anemia.

It appears to be fairly well demonstrated that many patients with vague symptoms, in whom no organic disease can be found, may suffer from a slight but persistent cholemia and anemia, and that their return to health may depend upon the removal of this condition. The simple test mentioned above may give the necessary information. If desirable, by the use of larger amounts of blood and more accurate methods, the amount of the bile may be more accurately determined.

Blood serum which is darker than normal, and yet fails to give the Gmelin reaction, or any other test for bile, may be found. Perhaps one form of this pigment is more common here in California, where vegetables are easily found throughout the year, and where there are so many people of peculiar dietetic philosophies. Hess and Myers (A.M.A. Journal, December 6, 1919), gave the

THE PLACE IS CLEVELAND, THE TIME IS JULY 25-29

term "carotinemia" to a condition in which the serum is tinted by carotin, the coloring matter of carrots and of several other similar vegetables. In extreme cases, the skin, urine, and mucous membranes are also colored a yellowish tint, so that a wrong diagnosis of jaundice may easily be made. Usually, however, there is either no discoloration of the skin, or a slight sallowness only. The blood serum may be quite a dark yellowish color. By the use of considerable amount of the blood serum, the pigment may be identified as carotin, though in ordinary clinical laboratory studies this is not essential.

There is a considerable amount of belief nowadays that meat is not proper food, and that good blood can be made from green and other vegetables. Whether this is true for some people or not, there seems to be no doubt that there are people who seem unable to make blood from these foods; the more of the green and colored vegetables they eat, the more anemic and sallow they seem to become. Their blood is that of long-continued secondary anemia, with evidences of toxemia, and with serum dark in color, but not giving the usual tests for bile. Carotin seems to produce vague symptoms of weakness and toxemia, nervous irritability, sometimes insomnia, dull headache, and sallowness. These symptoms too often lead to exactly the dietetic advice which is contra-indicated, viz., greater proportion of vegetables. When put on meat, milk, cereals, and, in general, everything they have previously been avoiding, the symptoms often clear up with amazing speed. As soon as the serum is clear and the hemoglobin well on the way to normal, an ordinary good mixed diet should be given, and this made permanent.

In chronic malaria and in less common conditions characterized by destruction of erythrocytes in the general circulation, the hemoglobin set free may tinge the blood serum. The serum is then usually slightly darker than normal, but is still of a straw-color. Such serum does not give any bile test, but may show brownish red, or brownish green, with the Gmelin test. The urine usually shows hemoglobin in these cases, and this may be analyzed, showing the hemoglobin; the spectroscope is the most useful test in these cases. While hemoglobin may be demonstrated in the blood serum also, the use of a sufficient amount of blood is hardly necessary in most cases. Malarial patients may, of course, also suffer from hepatic disturbances and bile be found in the blood, as well as hemoglobin.

There are other pigments which may affect the blood serum, but these already mentioned are rather common, are important in diagnosis and in outlining treatment, and are recognized with fair accuracy and sufficient ease by simple methods of investigation.

LOUISA BURNS, D.O.
The A. T. Still Research Institute

REDUCED RATES

CLEVELAND, OHIO

July 18-23, 1921—American Osteopathic Society of Ophthalmology and Oto-Laryngology

CLEVELAND, OHIO

July 25-30, 1921—American Osteopathic Association

The following Passenger Associations have granted a reduced rate of one fare and a half on the certificate plan for the annual Convention; The Central Passenger Association, Trunk Line Association and the Southeastern Passenger Association. It is expected that all other Passenger Associations with the exception of those in Canada will grant this same reduced fare.

Tickets at the regular one-way tariff fare for the going journey may be obtained on any of the following dates (but not on any other date) July 14-20 and July 22-25 inclusive. Be sure that, when purchasing your going ticket, you request

a CERTIFICATE. *Do not make the mistake of asking for a "receipt."*

If the necessary minimum of 350 certificates are presented to the Special Agent, and your certificate is duly validated, you will be entitled up to and including August 3, to a return ticket via the same route over which you made the going journey, at one-half of the regular one-way tariff from the place of the meeting to the point at which your certificate was issued.

Further particulars will follow in the June JOURNAL.

W. A. GRAVETT,
Secretary.

NOTE:—The roads from the West Coast have announced a rate of a fare and a third for the round trip, which will be available for the Cleveland meeting.

The Endocrine Brain

(Continued from page 498)

There is an easily perceived quality in the very form of these organs already referred to (2). It is further learned that this quality is, in fact, this very polarity. Related to the conscious pole are the anterior pituitary, interstitial thyroid, adrenal cortex; to the reproductive pole the posterior pituitary, glandular thyroid, adrenal medulla; with, however, the pituitary more closely related to the conscious pole and the adrenals more closely related to the reproductive functions (4). Between these two halves of each organ, and between and among the organs as wholes, a system of checks and balances is found to exist, on which depends the interpretation of many clinical phenomena.

The polarity seen in the duality of these organs is in turn the same as that between the sexes; except that in the sexes the division is made complete. The two sexes are the complemental parts, the intaglio, of each other. The emphasis in the male is on the cortical pole, in the female on the reproductive functions; the one deals with external unities, the other with internal harmonies. In the former the reproductive organs themselves are externalized. This externalizing movement is general. It is found in even the muscles; the long skeletal muscles, crossing two or more joints (and therefore external), such as the biceps, are relatively larger in the male, while the short muscles crossing the one joint only, such as the brachialis antichus, are relatively larger in the female.

14 CENTRAL PARK WEST.

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Problems of the Profession

DR. CONKLIN DISCUSSES CONSOLIDATION

AT the last Convention the House of Delegates adopted certain definite recommendations, and instructed the Board of Trustees to carry out the same. In accordance with these instructions the Board elected a Secretary-Treasurer for a period of five years at a salary of $10,000.00 a year. This consolidation with a central office in Chicago the Board was instructed to carry out before the next National meeting. Some recommendations were left over for action at the next meeting, but this was not one of them.

I make this and the following state-

ments for the benefit of those of our profession who like Dr. Upton were not present at the last Convention. Those who were present know that on all sides there were demands for changes of this sort, demands for something in the way of organization which would permit of a definite policy of constructive work to be mapped out for a period of years—not a year by year policy which gets us nowhere, but a policy which will enable the Association to accomplish something, to give to its members individually and collectively, and through which service on the part of individual members can find an adequate outlet. Why do we have an A.O.A., and what has the A.O.A. as an organization ever accomplished? What has it stood for? How much legislation has it secured? How much has it done for publicity? To the first question we might answer: "It has issued a magazine and has put on a program once a year." To all the other questions we might answer "nothing." I do not say that good work has not been done in the A.O.A., but it has been "one-man" work, not team work. Why? Because we've had no definite policy decided upon and worked to by the whole organization. We've often had in office able men and women with ideals, with vision, but what they accomplished was too often uncorrelated with what had gone before and what was to follow. For instance, Dr. Riley while President collected valuable data concerning the flu. Dr. Fryette's administration worked out a new constitution and by-laws which was a vast improvement over the old. Dr. Waldo has been doing a fine work in the west with his extended lecture work. But these are examples of "one-man" work and unless the A.O.A. correlates these efforts and results, and builds on them for future development, all this work is of little avail. Again, Dr. Scothorn was at the head of the Educational Committee last year and again this year. He did valuable work. He has laid a very fine foundation during these two years for our educational work in the A.O.A. His term on the Board expires this year. It is not customary to re-elect members to the Board, so unless we have someone who has been in touch with his work during the past two years to outline future plans of educational work on the foundation Dr. Scothorn has constructed, all of his valuable work and time spent are lost. The same is true of all the other Departments where constructive work is being done. Here again is demonstrated the fact that we must have a strong central office with a good man in charge employed for a period of years.

As for Dr. Upton's estimate of expenses. For the sake of discussion let's assume that he might be correct. Why not spend every cent of revenue if necessary, and *secure results,* rather than spend half as much and get nowhere? Dr. Upton suggests that by continuing under the old get-nowhere policy that we might "probably be able to set aside between $15,000 and $20,000 this year for expansion purposes." He also writes of having next to nothing left for legislation and publicity under the new organization. What, may I ask, has publicity work or expansion or legislation on the part of the A. O. A. gotten us in the past? Nothing! That is just what the osteopaths in Convention last July felt to be the case, consequently the determination to so improve the organization that something might be accomplished by deciding on a course to pursue for a period of years. So far as publicity goes, Dr. Scothorn in the March JOURNAL points out that in twenty-five years we've had before the public four articles on osteopathy. It would be laughable if it were not so tragic. That's what we have accomplished by way of publicity, and in all probability the credit for all four of those articles can't rightfully be given to the A.O.A. So much for publicity. As for legislation. What has the A.O.A. done? We did attempt to get recognition for our profession during the war. This we failed in, but did undoubtedly accomplish some good. It seems to me that the only real constructive work we have done in legislation was last year when we employed Dr. Atzen to draft a model bill for the States, and then to help the different States that needed or wanted to secure legislation to get this bill through. In fact, practically everything which has been done by way of publicity, expansion, and legislation has been done by individuals or by local organization. Hav-

ing for the moment and for the purposes of discussion granted Dr. Upton's estimate of expenses under the new regime, let's give those a little consideration. The whole thing seems to simmer down to this—that it's cheaper to conduct two offices than one. And that it will cost less for clerks in two offices than in one. And that it is cheaper to pay $5,000.00 to each of two men for half-time than $10,000.00 to one man for full time. It sounds rather absurd. Furthermore, it is impossible for a Secretary to give his best efforts to the Association if he is combining that office with private practice. For that reason the House of Delegates last June took action to combine the offices of Secretary and Treasurer. This combination really adds but little to Secretarial duties. In fact, previous to 1919 the election of a Treasurer was largely perfunctory to meet the requirements of the Constitution designating two separate officers. The detail work was done by the Secretary. The Treasurer was not paid a salary. It was believed and stated informally among members of the House that a change in the constitution was not necessary to elect a Secretary to these two offices. However, if there is to be any delay this year because of this technicality it can very easily be avoided by electing a Treasurer to serve in the same manner as formerly. The only additional expense, speaking generally, will be incurred in the establishment and maintenance of headquarters and additional clerical help necessary in assembling activities under one head. What little added expenditure is necessary for this purpose should be more than compensated for by the results obtained. We're after *results*. We don't want an A. O. A. simply for the sake of *having* one. It is results that count. And, personally, I feel persuaded that the members of the A. O. A. would be willing to double or triple the dues if necessary if the Association can show results.

I am answering this article of Dr. Upton's because I see very plainly that he as well as others who did not attend our Convention last year might have failed to get the basic idea of all the business transacted there. The object was to secure continuity of policy and work. That hereafter our National Association instead of changing its policies, if it has any, year by year, should continue from year to year according to a well considered plan, a plan worked out carefully with regard to education, publicity, growth, legislation, not just for this year but also for the years to come. Instead of the different Departments doing practically independently such work as the head of the Department that year might lay out for it, there should be policies adopted to be carried on from year to year, and these to be under the direction of a Secretary who is to hold office for a number of years and devote his entire time and attention to these things.

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WHAT SHALL OUR PROFESSION'S ATTITUDE BE TOWARDS OUR IMITATORS?

FOREMOSTLY I think it should be an insistence upon their meeting some real standards. We have a starter and a basis in the standards established in Montana, Minnesota, Nebraska, South Dakota and Missouri where standards of three years of eight or nine months each actual attendance work preceded by a four-years' high school course as a preliminary are required by law of our imitators. Also a sworn statement of credentials presented should always be required and the phrase "or its equivalent" as regards the college or the high school course should be safe-guarded if it occurs in the law. For instance, as to the high school course, if an equivalent is allowed, it should be an equivalent satisfactory to the state board of education or the superintendent of public instruction, or some non-partisan educational body or person.

The Davenport outfit have published in large type the words "or its equivalent" in indicating the jokers in the various laws and commenting upon them. When the imitators have the administration of the law, unless they are tied down, they can recognize any old thing as an equivalent to real requirements, and it is practically impossible to go behind them and question.

SPECIAL R. R. RATES TO CLEVELAND MEETING, JULY 25-29

There are various suggestions appearing from time to time in our magazines to the end that we line up with the various fake osteopathic propositions. Osteopathy should stand out as the elevated and uplifting proposition in the mechanical end of the healing art. We should pull up and not go down ourselves. We cannot afford to be identified with these people except as they measure up to something like reasonable educational standards and an ethical attitude that is not absolutely mercenary.

In given legislative situations an understanding with these people might sometimes be wise but we cannot afford to have the people identify us with them and their low standards and mercenary ideals as the medical profession improves every opportunity to have them do.

Sometime ago, the Davenport doctor factory sued the City of Edmonton, Alberta, for $5,000 and the College of Physicians in connection with the University of the Province of Alberta for $15,000 because the college registrar had published in the city telephone directories curricula covering the fundamental subjects in the medical, osteopathic and Palmer chiropractic schools. The medical and osteopathic in hours ran along about the same. The other hours were comparatively insignificant, and suit was brought for damages by the Palmer chiro college. It was tried last week (early April) and dismissed. The following is taken from the reports of the trial:

"Mr. Ford went into a learned disquisition on the subject of pediatrics much to the amusement of the court. When Dr. Palmer asserted that his understanding of pediatrics was the study of diseases of the feet, counsel sarcastically asked if he thought the term came from the Latin 'pes, pedis,' a foot. The witness intimated that such might be the case, whereupon Mr. Ford learnedly insisted that the derivation was from the Greek word pais, meaning a child and that pediatrics had to do with the study of diseases of children. Dr. Palmer countered with the observation that it wasn't his subject anyway at the school, that the subject wasn't really taught as pediatrics but came under the heading of chiropractic orthopaedy."

The above quotation indicates the educational status of the one who is head of the largest bunch of our imitators and reflects of course that of his doctor factory's products. When we then as a profession affiliate with these people as they are now conducting their schools and their practices, we go down to their level.

Another point in re our imitators which I had no intention of touching upon as I started this is the matter of establishing historically the priority of osteopathy. This has nothing to do with the legal proposition of regulation, although many of our folks seem to think it is very vital. It is, though, a matter of justice. It is something that we owe to our "Old Doctor" as the founder of osteopathy and I think it is something that we really owe to society, for truth should be established.

Just because a certain bunch of people are so blatant, so unscrupulous, and so insistent that they can make a large part of the public believe that in the matter of spinal adjustment the followers of Dr. Still are merely imitators is no reason why we should lie down, tacitly accept their statements and let it go at that.

Mr. Cook might have gotten by as the discoverer of the North Pole if some people might not have insisted on truth's being established. As it is Mr. Cook is generally referred to alongside of Ananias, and if we maintain our professional integrity, keep reasonable standards and pull the mechanical end of the healing art up to those standards and at the same time collect the data which will establish our priority, the history of future years will give credit where credit is due, the followers of the healing art emphasizing the physical and relying basically upon manual structural adjustment will all be gathered behind the banner of osteopathy, and the Ananiases will be forgotten, but if we go down to the level of these people who are imitating osteopathy and allow ourselves to be identified with them, something else other than osteopathy will in the future be recognized as the THE in relation to the physical end of things in the healing art.

Men interested in establishing the truth as to the discovery of the North Pole got busy when accurate data was obtainable, and before passing this I think it would

be wise and proper for our bureau of statistics at this time while such data is still available to secure sworn statements from people now living who had their spines adjusted and their maladies cured by Dr. Still or those he had instructed through such osteopathic procedure prior to 1895.

When the imitators are forced to meet some real standards imitation will gradually cease if meanwhile the real has maintained its dignity and standing and consistently worked toward the ideal of being of the most service to humanity.

ASA WILLARD, D.O.
MISSOULA, MONTANA

Natural Law Controls Body Functions

By C. B. ATZEN, D.O., Omaha, Neb.

(Continued from April Issue)

Skeletal Framework

In this article, we will take up the skeletal frame-work, and in so doing, combine the bony, ligamentous, muscular and fascial systems, into one article, for the activities or functioning of these four systems are so closely inter-related that they can be analyzed more readily together. As the object of these articles is to determine by an impartial and practical analysis, which of the three natural laws, namely, chemistry, physics or psychology, dominates in the functioning of the various systems of which the body organism is constructed, we can analyze this problem quite readily by combining the above four named systems into one article. It is a self-evident fact, that the psychological law does not enter directly into the physiological functioning of the skeletal frame-work, but merely guides and initiates muscular activities. We need, therefore, merely to consider the laws that regulate the chemical and physical activties of the above named four systems, to determine whether chemistry or physics dominates.

We will first analyze the manner of work performed by each system within the body frame-work, and then determine what law dominates the functioning of each system. It is, of course, known to readers of this article, that the bony system constitutes the supporting frame-work of the body. It is made up of more than 200 units and undoubtedly is the most important system in the body mechanism, so far as supports are concerned. It is the bony system that gives strength, height, size and general physical dimensions to the body mechanism, and also stabilizes the body and gives firm attachment to the soft tissues. For if the soft tissues of the body were not firmly attached to the bony system, they would fall into a heap as the body assumed an upright position. However, if the body frame-work was entirely constructed of bones, it would be rigid and unable to perform or undergo the necessary bending, turning and twisting movements which are necessary in the activities of the body frame-work. This necessary flexibility to frame-work movements is imparted to it by means of the ligamentous system, which acts in the form of hinges, making the bony frame-work flexible, bendable, and twistable, giving to it, the necessary pliability and mobility that is needed for the performance of the various labors that we are constantly demanding from the body framework, and imparting to it the freedom of undergoing all the various kinds of body movements that are necessary in the performance of the different labors demanded of our bodies.

Now any shortening, stiffening or thickening of these flexible ligamentous hinges, which give to the body-frame its range of pliability and mobility, will cause impaired functional efficiency in direct proportion to which the altered ligaments interfere with the freedom of the motion in the body frame-work, and this is a purely physical cause and fruitful in producing innumerable disorders, both in the structural and visceral man.

Fastened to this flexible bony and ligamentous frame-work, we have the muscular system of which more than 500 named units exist in our bodies. When these muscular units shorten and lengthen, they act as pulleys and levers whereby various activities of the body are co-ordinated, regulated and performed. As each muscle must be free to act independently of each and every other muscle, at certain times to produce certain body movements, the fascial system comes into play. For it individualizes each muscle and gives to each unit a smooth glistening covering; likewise, subdivides each muscle into various departments by means of the intra-muscular sub-division of the fascia.

When the functions of the various systems of the body framework are separately analyzed, it becomes clear at once that all of the functions of the frame-work are physical acts, elaborated out of the crude chemical forces, derived from the body intake, which normally consists of air, food, and drink. This crude potential chemical force, derived from the chemical intake, is transformed by means of the muscles of the skeletal frame-work into skeletal movements, or activties. These muscle activities or movements may be either bene-

RESERVE JULY 25-29 FOR CLEVELAND A.O.A. MEETING

ficial or harmful, depending upon the motive or process initiating the skeletal movement, proving conclusively, that chemistry is merely the crude force employed; that the skeletal frame-work is the mechanism that performs the movements or acts; and that the state of mind is the guide for the movements.

This should make clear the facts that any impairment of the skeletal frame-work must manifest itself in reduced efficiency on the part of the skeletal mechanism, the same as it would do in any other mechanism, be the defect what it may, and that in order to restore a defective mechanism to its maximum efficiency, the mechanical disarrangement interfering with the free and flawless activities of the skeletal frame-work must be adjusted, and that the adjustment of the defective mechanism can be accomplished most easily and directly by the application of mechanical forces, or by means of Osteopathic treatments.

Can anyone who seriously analyzes this question doubt that physics dominates in the functional efficiency of this skeletal mechanism over chemistry?

It is conceivable that a structural defective skeletal frame-work is capable of functioning in the highest degree of mechanical efficiency?

Is it not a self-evident fact that a defective mechanism will do defective work? And is it not a further self-evident fact that the skeletal frame-work of our bodies, made up of bones, joints, muscles and fascia, working together in unison in the form of a mechanical or physical mechanism, is subject to physical or mechanical law as are all mechanisms constructed on mechanical principles? The fuel consumed by such a mechanism cannot dominate over the mechanical efficiency of the mechanism, consuming and transforming the fuel, when the end production of the mechanism is a totally different energy than the fuel that was consumed.

When the functions of the body are analyzed from the standpoint of natural law, freed from mysticism and superstition, it becomes almost a self-evident fact that physics and not chemistry dominates the functions of the body frame-work, a conclusion which leads to the additional fact that the fundamental principle upon which the practice of osteopathy relies, offers a unique, and practically a virgin field for research as a cause for disease.

In further proof of the correctness of these conclusions, the reader is asked to reflect on the therapeutic methods that are making progress, such as surgery, dentistry, optometry, etc., all of which in common with osteopathy, rely chiefly in their methods of practice, on the correction of physical defect in distinction from chemical disturbances.

(*To be continued*)

Departments

DIAGNOSIS

FRANK C. FARMER, D.O., *Chairman*

Los Angeles, Cal.

IN the previous article, the consideration of routine examination contemplated the examination of the master systems of the body, plus a specific examination of the individual organs previous to the structural tissues. As osteopaths, we will always include the structural examination and any laxness is more liable to be the organic rather than the structural. In the successive articles, of the department, this routine will be reversed because we will have need to refer to the osteopathic or structural lesion and the diagnosis of secondary effects. The osteopathic lesion, as the distinctive feature of the science, has been a favorite topic for fervent discussion for the past three decades, and the last word has yet to be spoken. By osteopathic lesion, we restrict the term to the distinctive structural lesion rather than the broader application to all types of pathology.

The Osseous Lesion

Many years ago Hilton discovered the somatic relation of the nerves about the joint and he formulated the axiom that the same nerves that supply the joint supply the muscles and skin thereabouts. A review of the anatomy and physiology of the joint and application of the law will explain the formation of the lesion and give us data for the diagnosis.

Within the interosseous tissues and within the ligaments are the efferent nerve filaments comprising the detecting apparatus. The ligaments, encompassing the joint, limit the range of motion and to a certain extent maintain the

two bones in apposition. The muscles move the joint and are the principal factors in maintaining the bones in apposition. The instant that the articulation is strained beyond the range of normal movement, the efferent nerve filaments are stimulated and the impulse is carried to the surrounding muscles via the spinal cord segment, throwing the muscles into instant contraction. If this phenomonon occurs in a joint with smooth regular surfaces, the two bones are thrown back to their original position and nothing results further than a strain. But if it occurs upon a joint whose articulating surfaces are irregular, or that a possible synovitis has rendered the surfaces irregular, the two bones are apt to be clamped into an abnormal position and securely held there by muscular contraction. This constitutes the simple, acute non-inflammatory osteopathic lesion. Persisting, the condition can easily become chronic and with an hematogenous infection, may become an acute or chronic inflammatory osteopathic lesion.

This gives us four types of lesions applicable to any articulation with irregular surfaces, with more or less distinctive characteristics, the therapy of each differing to a certain extent.

There are several features common to all upon which we must rely to make our diagnosis, viz., immobility, displacement, tense and sensitive ligaments on the one side and relatively relaxed and not sensitive on the other side of the articulation, marked changes in the character and consistency of the muscles about the joint, and finally the appearance of the skin in certain types. Surely, these should be great aids in making a diagnosis, but a letter is in front of me from one of our graduates in which he says that if he ever found and corrected a lesion, he was not aware of it.

If we should try to select the most persistent and reliable symptom from the above group, I would select muscular contraction as the one most constant and most easily ascertainable symptom. Mobility is a relative affair many times and difficult to determine accurately. Displacement can be easily confounded by distorted development or exostoses. Tenseness of the ligaments is somewhat difficult to determine in some types of patients, and tenderness is a relative affair. The skin enters the consideration in only two types of lesions. Wherever there is a lesion, nature immediately tries to immobilize the joint and this is done by muscular contraction, and a careful study of muscular contraction will give us most useful information. (An article, subsequently, will take up this subject in detail.)

In the question of diagnosis of the lesion, the first feature to be determined is the one of inflammation, because, if present, the therapy should be so directed. The therapy of arthritis differs from that of simple misplacement, and in those joints of the limbs where the cutaneous covering is in close relationship to the articulation, the inflammation soon manifests itself on the surface in the nature of heat and redness. But in the deep lying joints of the spine, inflammation can persist for a long time without external manifestation, and we must resort to other measures. This can be accomplished if we recall that the inflammatory surfaces are exquisitely sensitive to pressure. Have the patient sit upright on a solid stool, and standing back of him, with the hands on the shoulders, a sudden jolt is given to the spine. This should be tempered to the strength of the patient, however, and if there is inflammation present in any of the joints below the first thoracic, there will be a sharp pain in the articulation. The differential diagnosis is not made—simply the fact that there is inflammation in the joint affected. The history of arthritis gives a more severe and constant pain, but, on the other hand, I have seen severe neuralgic pains that were so severe that the history alone would suggest inflammatory processes. If arthritis is present, unless there be direct trauma, the infection will be an hematogenous one and there should be a prompt search for the source of the infection.

The diagnosis of the simple acute lesion is generally easily made. There is a history of the onset and generally the patient has distinct ideas as to the inception. The disturbance is localized and the secondary symptoms located in the immediate vicinity. The patient can usually tell the exact spot and readily points it out to the physician. The lesion is marked by a very sensitive area in the capsular ligament on the side towards which the displacement has taken place. The surrounding muscles are sensitive but not to the degree of the ligaments. The articulation affected is quite immobile and sensitive and resistant to any effort towards moving the joint. The displacement may be marked or not according to the type of articulation. The secondary effects may be so extensive as to overshadow the primary lesion, as in an acute subluxation of the lumbar vertebrae, preventing the patient from standing erect or even rising from his bed. But the out-standing feature of the acute lesion is the intense and constant muscular contraction about the joint and this in itself furnishes the one most apparent diagnostic sign.

Uncorrected, the acute may become the chronic lesion and the pathology of the former gradually assumes the characteristics of the latter. The immobility persists, and per-

sisting, causes an atrophy of the surrounding muscles not involved in maintaining the immobility, a disuse atrophy, while those muscles directly concerned in maintaining immobility, being placed on constant strain, undergo atrophy from fatigue and overuse and become as whip cords. The sensitiveness of the ligaments decreases, the ligaments, themselves, becoming more palpable because of the atrophy of the surrounding muscles. Likewise the deformity is more apparent. Those ligaments upon which the most strain is thrown, respond to the stimulation by increasing in thickness, and with the changes in the interosseous tissues, may form a bulwark preventing the adjusting of the lesion. That actual interosseous adhesions form in the simple lesion, is to be doubted.

The secondary effects of a chronic lesion, usually are extensive, and a survey of such would lead to all parts of the body and is outside the realm of this department, although it forms an interesting study. The diagnosis between a primary and a secondary lesion frequently is very difficult, and success is only attained by having a wide knowledge of the normal anatomy and the mechanics of the body. From a purely diagnostic point of view, contraction of the muscle will be of some assistance.

That stimuli arising in an end organ, referred back to the spinal cord and thence to the spinal muscles causing a chronic contraction, thereby disturbing the mechanical equilibrium of the spine, and becoming a constant source of recurring lesions, has long been known but seldom recognized by the average practitioner. The routine examination in conjunction with a competent case history will generally give a proper perspective of the relative importance of spinal lesion and organic pathology.

Focal infection plays an important part in the maintaining of osteopathic lesions and the routine examination will ferret out this possibility. It has become a routine measure in many surgical clinics to eliminate all possibilities of focal infection before performing major operations. While this may easily be carried too far, yet, bearing in mind the fact that many of our lesions are perpetuated by the slow and constant toxine of focal infection, should lead us to redouble our efforts to make a complete competent examination at the first rather than awakening to the fact of extraneous forces only after we have corrected and re-corrected a secondary lesion. As Dr. S. S. Still many times told us that if we had set and re-set a lesion weekly for nine months and it did not stay set, it would be well to make some change.

FERGUSON BUILDING

HYDROTHERAPY

MORRIS LYCHENHEIM, D.O.
Chicago

In a review of the effects of Mineral Spring Baths upon the human being, Hinsdale,[1] after giving a table, concludes as follows:

The table shows that there is twenty thousand times as much sodium chloride in the Mt. Clemens water, as there is in the waters of Virginia Hot Springs; the former are heavily charged with hydrogen sulphid, while in the latter, the gas is imperceptible, being present in only .1 cu. in. per gallon. The Hot Springs of Arkansas have comparatively little mineral content.

Here, then, we have three mineral springs widely separated geographically and varying greatly in the composition of the mineral contents, yet all three yielding satisfactory results in a given disease, e.g., rheumatism.

Winternitz[2] found it impossible to demonstrate the direct entrance of drugs such as atropin, cocain, lithium, chlorid, etc., into the skin from watery solutions, though they were absorbed as ethereal solutions. It may, therefore, be considered as established that uninjured human skin is not permeable to water and indifferent substances dissolved in it, even after long continued exposure, and that absorption of fixed constituents through the skin does not take place in mineral baths.

The skin of the bather, however, is probably permeable by the gases and the volatile constituents of the mineral water, as the author has demonstrated for carbon dioxid.

Further on, it is stated "the chemical stimulation of the skin is the effect particularly distinctive of the action of mineral baths."

A scientist is not concerned in propaganda. The virtues of waters of a certain sort, widely advertised, do not disturb the scientific student. The osteopathic practitioner must be a scientific student and not be led into using dead, inert substances for temporary relief at the ultimate expense of the vitality of the patient. We are tempted to send patients to various resorts through glowing ads, whereas the virtue is in getting away from a depressing mental or physical environment, into the open with liberation of mind and body. Let us send patients away, if need be, for liberation of mind and body, but not offer hope of cure through mineral baths, etc.

This leads to other recommendations for various ills. For instance, the use of various drugs and use of soapsuds, turpentine, magnesium sulphate, i. e., epsom salts, tannin, soda, molasses, etc. for introduction into the body per mouth or rectum.

In the March number of Philosophy of Health,[3] we read of yeast as a remedy:

[1] Hydrotherapy, page 19.
[2] System of Physiologic Therapeutics, Vol. IX, page 370.

The yeast manufacturers can make a mint of money if everybody can be induced to eat and drink their product.

People want something to make the bowels move, and they will take anything recommended.

While the yeast is popular, people will ruin their digestion taking the putrescent stuff; when they learn after a while that it creates catarrh of the stomach and bowels, they will be ready to take up another **cure** and get busy endeavoring to cure the yeast disease.

Molasses or molasses candy will move the bowels by causing fermentation. The cure is worse than the disease.

Personal experimentation leads me to the conclusion that physiological functioning can only come through physiological procedures. To excite the body to activity by a so-called remedy which may arouse over-activity and then collapse is a mistake. We can prescribe exercise, rest, baths, breathing, fasting, proper diet, water drinking, enemas, etc. by graduated stages. It is hard to realize that exercise can be prescribed in steps from the most simple physiological movement to the most complex, and, yet, that has been done by scientific investigators of the use of movement for health and disease. We tell a patient to take exercise, but we rarely prescribe the kind and amount. As to the use of any substance not native to the body per mouth or rectum, my own rule of practice is to depend on agents at various temperatures, rather than on unorganized chemicals. Foodstuffs are organized chemicals that can be absorbed for the maintenance of the body, but I doubt the virtue of any substance introduced that is not organized, except water, which is the largest constituent of the body; hence required. The other day, I saw a full page "ad" of a soap concern denying it was owned by foreigners. As this concern constantly spends immense sums for advertising, it is to be presumed it was necessary to deny foreign affiliations. But the thought occurred, how little money is available, for advertising normal ways for keeping in health.

We heard nothing of constipation among the soldiers when they were kept busy with drills and "setting up" exercises. But when the enlisted man returned to his work, often of sedentary habit, and confined in doors in vitiated atmosphere, he was a victim again of constipation, and later of appendicitis to be relieved by the surgeon's knife.

If we cannot secure normal activities by the layman before he or she comes for treatment, we can at least exert our influence in leading people into right lines and demonstrating the power of our physiological treatment.

39 So. State Street

[9]Tilden, Philosophy of Health, March, 1921, page 527.

STATE BOARDS

Leslie S. Keyes, D.O., *Editor*

Minneapolis, Minn.

It is with supreme pleasure we welcome two new states into the Independent Osteopathic Board family, namely Oklahoma and Iowa.

We know of no greater endorsement for the model bill than that the old medical board state of Iowa should come through with such a single triumph. It showed fine generalship and co-operation such as only those who took part can appreciate.

The governor appointed the following members:

H. J. Marshall, President, Des Moines.
C. J. Crestensen, Keokuk.
Roy B. Gilmour, Sioux City.

The first Independent Osteopathic Board was appointed by the Governor of Montana on March 27th, 1901, just twenty years ago. Dr. Asa Willard was the first Secretary. We congratulate him for the honor he has enjoyed in being the officer of longest continuous service in osteopathic history.

The editor has been endeavoring to find out how many boards give a practical examination in Theory and Practice. From the best information obtainable we are led to believe that few do. It therefore appears that the subject on which our new graduates should be most definitely examined has been neglected. We say neglected, because no written examination ever really tested one's ability to give osteopathic technique.

The Minnesota Board has appeared critical because of the disappointments we have had in giving practical examinations in Theory and Practice. It is the exception and not the rule for applicants to have the real osteopathic concept and know how to correct lesions.

Would that other Boards would awaken to the necessity of such examinations and report their findings. The responsibility for the future of osteopathy rests in part with the kind of osteopathic physicians we license.

The new Iowa board, organized April 21, with Dr. Chrestensen, president; Dr. Marshall, vice-president and Dr. Gilmour, secretary-treasurer. The first examination under this board will be at Des Moines, June 8, 9 and 10.

June Examination Bulletin

California—June, 28th to July 1st, San Francisco. Application must be in two weeks in advance.

Idaho—Third Monday of June at Boise. Application must be in 15 days before examinations.

Illinois—Chicago, June 14-17. File applications by June, 1st, Supt. of Registration, F. C. Dodds, Springfield.

Iowa—Des Moines, June 15th. Dr. H. J. Marshall, President, Hippe Building.

Kansas—Third Wednesday in June, Topeka. Application must be in ten days before. F. M. Godfrey, Topeka.

Maine—At Augusta. A. E. Crittenden, Auburn.

Maryland—At Baltimore. Hedley V. Carter, 319 N. Charles Street, Baltimore.

Michigan—At Battle Creek. Dr. H. W. Conklin, Battle Creek. Application in two weeks before.

Mississippi—About June, 15. W. S. Leathers, M. D., Secretary, Jackson.

Missouri—First of June, at Kirksville and Kansas City. F. M. Shouse, 729 Troost Street, Kansas City.

New Jersey—Third Tuesday and Wednesday, Capitol Building, Trenton. Alex MacAlister, M. D., State House, Trenton. Applications in 10 days before.

New York—At Buffalo. Geo. M. Wiley, Chief Exam. Division, New York State Education Department, Albany. Application must be in 10 days in advance.

North Carolina—At Raleigh. W. Banks Meacham, Ashville. Applications in 30 days in advance.

Ohio—Columbus. H. M. Platter, M. D. State House, Columbus. Applications filed two weeks in advance.

Pennsylvania—At Philadelphia. John T. Downing, 305 Board of Trade, Scranton. Apply one month in advance.

South Dakota—J. W. Pay, Milbank. Applications in 30 days before examinations.

Texas—At Austin. S. L. Scothorn, Dallas, Ost. member. Applications in two weeks before examinations.

Vermont—L. D. Martin, Barre.

Virginia—J. W. Preston, M. D., Roanoke. Application in 10 days in advance.

Wisconsin—Last Tuesday at Milwaukee. J. M. Dodd, Ashland. Applications in 10 days in advance.

X-RADIANCE

EARL R. HOSKINS, B.S., D.O., *Chairman*

Chicago, Ill.

The following case reports are by Lawrence E. Day, D.O., Detroit.

IN looking over some old cases which have come under my observation from the standpoint of x-radiance I have chosen a few to demonstrate the value of a thorough examination made in the x-ray laboratory.

Case No. 879 is a woman of moderate build, having enjoyed fairly good health up to the time of an accident, being thrown forcibly forward in a traction accident and striking as she explained it "in the small of the back, somewhat to the right side." She was confined to her bed for some time after the accident and had osteopathic care from the date of the injury, with especially good results up until the time she was able to be on her feet and around again, at which time she noticed a marked irregularity in her carriage, and symptoms of pain throughout the lower dorsal and lumbar region upon attempting to assume an erect posture for any length of time. Physical examination revealed to the osteopath in attendance that there was a marked rotation and lateral curvature making itself manifest throughout the entire dorsal and upper lumbar region, and treatment and corrective exercises were directed to this region in an effort to correct the curvature, but seemingly with little result, the curvature becoming somewhat more apparent as time went on, and the operator naturally was very puzzled.

There was a curvature of the dorsal region when the patient was first presented for the X-ray examination, and at my suggestion a plate was made of the lumbar region which showed very plainly the basis of all the trouble in this case, namely, a fractured right transverse process of the fourth lumbar vertebra; this condition naturally causing a compensatory curvature in the dorsal region due to the unequal tension exerted upon the spine in the effort to hold the body upright, the inequality being due to the lack of attachment of the intervertebral ligaments and the deep muscles of the erector spinae group on the right side because of the fractured transverse process.

Information derived from the radiographic examination in this case caused the physician in charge to adopt a different method of accomplishing the desired results and a change for the better was noted at once. The patient at this writing being in such good health as to be the owner and an active demonstrator of a modern dancing school.

I call attention to this case merely to show that it is sometimes possible that the X-ray may show the practitioner a condition which may have escaped his attention under the ordinary methods of physical examination by the palpatory method. I might also add that in this case there was pain and swelling around the lumbar region on the right side, but not seeming to localize itself at that point any more than throughout the entire mid-dorsal region after the first acute symptoms of inflammation had subsided. So that, due to the extreme tenderness along the entire right erector spinae group, it would have been difficult to have palpated and correctly diagnosed the true condition of the fractured transverse process.

Case No. 1017 reported to me for a general physical examination, the patient being a woman of 34, suffering from a run-down condition of the entire body, complaining of severe

suboccipital pains and a constant aching, drawing sensation, between the shoulder blades. She had no reserve vitality, tiring very quickly and recuperating very slowly. Had osteopathic treatments for several years giving wonderful temporary relief but nothing permanent or lasting. History of pain and tenderness in region of left ovary most marked at menstrual periods. Menstruation growing more scanty for past year and accompanied by more discomfort. Gas belched up in quantities after eating but no other signs of any gastro-intestinal disturbance and no constipation. A general physical examination revealed little, and a complete gastro-intestinal examination was suggested. This examination was made, and a copy of the report sent to the physician in charge of the case is appended.

The routine fluroscopic examination revealed the heart and lungs normal. The passage of the opaque meal through the esophagus and cardiac orifice of the stomach was unobstructed and normal. Sixteen ounces of the opaque meal were given to canalize the stomach, the lower level of which is apparent at a point seven inches below its normal position at the level of the umbilicus. Accompanying this extreme ptosis is a decided lack of tone evident in both the circular and longitudinal muscle fibers of the stomach, permitting the food to sink rapidly to the lower half of the stomach, the strain thus caused approximating the walls of the upper half of the organ. In this ptosed condition the stomach is resting directly upon the contents of the left half of the pelvis causing pressure symptoms and pain presumably in the left ovary. Peristaltic action is negative with the patient standing and only moderate when the patient assumes the reclining posture. No pathology is noted in the region of the fundus, duodenal cap or duodenum. The stomach is freely mobile, being raised out of the pelvis with little difficulty by deep, unlifting pressure directed in the lower left quadrant of the abdomen. Examination made at this time with the patient standing, depicting degree of ptosis.

At the second examination made six hours later there was noted a retention of about six ounces of the opaque food in the stomach. Turning the patient on her right side started a movement of this material through the pyloris, but when the upright position was again assumed peristaltic action ceased due to the inability of the atonic stomach muscles to raise the retained stomach contents in the pouch-like sack at the lower border of the stomach up to the level of the pyloris so that the food might pass out through the duodenum. This condition would undoubtedly be even more markedly exaggerated after the ordinary solid food taken into the system at meal times, and there is no doubt but that the patient's distressing symptoms of gas in the stomach noted several hours after eating were due to the retention, stagnation and subsequent decomposition of the food retained in the stomach until the ingestion of the next meal gave impetus to the passage of the food from the stomach. There was some undue retention in the small intestines, which also showed a marked degree of prolapsus.

At the third examination made twenty-four hours after the ingestion of the opaque meal, there was no retention noted in either the stomach or small intestines. Both the hepatic and splenic flexures were low, showing a complete enteroptosis accompanying the ptosed condition of the stomach proper. (I might add here that in every case of gastroptosis there must be a corresponding degree of ptosis seen in the transverse colon due to the attachment between the stomach and transverse colon which cannot permit of ptosis of one organ without the other. However, you do not find the low lying hepatic and splenic flextures in these cases unless you are dealing with a complete case of visceroptosis involving practically all of the abdominal viscera.) Accompanying this condition was noted a marked spasticity and irregularity of filling throughout the entire large intestinal tract, suggesting a chronic inflammation and severe mucous colitis. (Subjective symptoms prove this conclusion, the patient passing large quantities of stringy mucus daily.)

This concludes the description of the X-ray findings in this case, and I might add as an item of interest that this case after six months of osteopathic treatment aided by a carefully regulated milk diet and a properly fitted ptosis pad worn continuously while the patient was on her feet have abolished all of the distressing symptoms, the patient having gained in weight and general health, no signs of any mucus or shreds appearing in the stool within the last two months. A recent X-ray examination of this patient's stomach shows the ptosis support holding the stomach in normal position and sufficient intra-abdominal fat has been accumulated to reduce the amount of ptosis from the original seven inches to three inches at this time even with the supporting garment removed.

Women, Have You Joined?

On February 2nd, a Federation of the Social Welfare Departments of Women's Organizations in Ohio was formed. (It was a red letter day.) Large sums of money are to be used by this Federation in welfare of girls, babies and mothers.

The Ohio Osteopathic Women's Association was invited to send a representative to the Executive Board meeting. In this big national and state program for social health the most skillful women in the country are needed to carry out the plans, which include the establishment of home training schools, farms, etc.

THE PLACE IS CLEVELAND, THE TIME IS JULY 25-29

Women physicians, women lawyers and the most proficient social workers are leading in these plans. How we hang our heads in shame when we see that our beloved America ranks eleventh among countries in baby saving. The women of the osteopathic profession are now prepared to unite in a great national organization.

This is only one of the many calls that have come to the Osteopathic Women's National Association. Our president, Dr. Josephine Liffring Pierce, as an experienced club woman and one of the leading welfare workers of the state of Ohio, says that we must have 100 per cent membership in the Osteopathic Women's National Association.

This association is invited to unite with other national women's organizations in national welfare work, as it is evident to all, that osteopathic women physicians are particularly trained to be very useful in conserving the health of women and children. This Osteopathic Women's National Association calls on all osteopathic women physicians to work together as a national unit. There are at present fourteen other national women's organizations working for a grand federation or "Federation of Health," to which group we logically belong.

Every woman who is not already a member of this association should send in her application for membership to the Secretary, Dr. Katherine McLeod Scott, 502 New First National Bank Bldg., Columbus, Ohio. Dues are as follows:

Active membership, women osteopathic graduates—$5.00.

Association membership, wives of men osteopaths—$2.50.

Student membership, students in osteopathic colleges—$1.00.

ELIZA EDWARDS, D.O.

CINCINNATI

With the Colleges

American School of Osteopathy

R. E. Hamilton, physician in charge of the Specialty Hospital at the A. S. O., is carrying on a campaign for a change of optometric laws wherever necessary to exempt osteopaths as well as M.D.'s from the necessity of taking examinations to do this kind of work. In some States of course, they are already exempted but it is hoped to make it unanimous.

Norman MacDonald, for the past two years resident surgeon of St. Bartholomew's Hospital, London, England, with five years service in the English Army and Navy cousin of Drs. George and William MacDonald of Edinburgh, Scotland, has just been added to the diagnostic staff of the Infirmary and Hospitals of the American School of Osteopathy.

The student Band of the A. S. O. is making quite a reputation in Kirksville as well as surrounding towns. They recently made a trip to Macon where they put on a concert.

The Student Volunteers among the students at the A. S. O. have attempted a rather ambitious undertaking. The Student Volunteers is a religious organization whose members have pledged their willingness to take up foreign missionary work after the completion of their college course. Six delegates from this school went to the State Convention of the Volunteers with pennants, banners and yells, determined to make a start toward putting osteopathy on the Missionary map and securing recognition for members of this science as medical missionaries.

D. W. Dodson, President of the Missouri Osteopathic Examining Board, delivered the graduation address for the January, 1921 class at the A. S. O.. Among other things he said:

During my visit at the school the last few days, it has been my privilege, together with the other members of the Board of Examiners of this State to look into the work being done by this school, and I want to say it is due the school and these students for me to make this statement: That in the examination of the papers of these students and a critical examination of them I found, and we found, more of true osteopathy in their answers than in almost any class that we have previously examined.

It showed to us that the rumors that may have gone about that they are not teaching straight osteopathy, are not true, and that this school is going forward and carrying on the

work that was started by its founder, and that osteopathy is in good hands today in this school. I am proud to make this announcement and I was proud to learn, and I am glad that I have been here and ascertained these facts.

H. V. "Spine" Halladay was scheduled as the speaker at the February meeting of the St. Louis Osteopathic Association. The St. Louis bunch planned to have a banquet with invited guests including surgeons, School Board Members, the Mayor of the City, Preachers, Priests and a Rabbi, and newspaper repotrers. The idea was that if osteopathy can be brought in Dr. Halladay's vivid fashion before these molders of public opinion, that a great deal of the right kind of education will result.

Members of the faculty of the A. S. O. have taken an influential part in the programs of the Child Welfare League organized among the citizens of Kirksville some weeks ago by the Hygiene and Health Department of the Kirksville State Teachers College. This department is headed by a graduate of the A. S. O. who is assisted by osteopathically trained helpers. Among the faculty members who have already had a part on the programs of the League, are Drs. R. E. Hamilton, L. J. Conner, J. F. O. Howell, and Miss Cora Gottreu.

The annual Post Graduate course and Alumni Convention will be held this year from May 23 to June 4. The unusually strong spring schedule of the A. S. O. will be the foundation from which the lectures of this course will be picked. Those who took this course last spring are enthusiastic in their praise.

A great number of American veterans of the world war have received various kinds of osteopathic and surgical treatment at the A. S. O. and its hospitals. Now comes a man, Cezre DeBocco, still enrolled in the Italian Army, and suffering from wounds received in the Argonne fighting in August, 1917. He is undergoing treatment by Dr. George Still.

RAY G. HULBURT, D.O.

Des Moines Still College of Osteopathy

These notes are compiled just at the close of the semester's work, hence indulgence in a bit of retrospection may be permitted. The college has had a wonderful half-year. Several notable advances have been made, chief among them the achievement of an unprecedented solidarity of purpose on the part of faculty and student body. Never in the history of the institution has the spontaneous enthusiasm for the ideals of osteopathy been more marked. Every department, didactic and clinical, has experienced a normal, healthy growth and each is an attestation of the compelling power of a common purpose.

Following is an approximate statement of the activities in which the students who are working in the college clinics have participated during the semester:

Examinations in general clinic.....	348
Private examinations of clinic patients	234
Treatments in general clinic.....5956	
Examinations in gynecological clinic.	108
Treatments in gynecological clinic...	560
Obstetrical cases attended by seniors.	47
Pre- and postpartum calls by seniors.	580
Cases examined in obstetrical clinic..	82
Surgical cases handled in D. M. General Hospital Clinic for Senior Students and P. G.'s:	
Minors	650
Majors	179

Several remarkable cases have been handled in the general clinic during the semester just past. One such case was reported last month. Another record is submitted herewith.

December 12, 1920, Miss J., aged 34, applied for examination and treatment.

Family History: Negative.

Personal History: Dates back twenty-nine years. It is reproduced as dictated by Miss J.

"When five years old I fell distance of twelve feet, lighting on the top of my head. Shortly afterwards I came down with grippe and my ears began to run and pain. For more than a year I had earache badly and couldn't start to school.

"Beginning with the fall I gradually became deaf. At the age of ten I couldn't hear an ordinary conversation. When I was sixteen I could not hear voices unless they were very loud. At twenty I was totally deaf.

"During the past fourteen years I have been to many doctors. None of them gave me any hope. I tried chiropractic, Christian Science and almost everything, but I got no better.

"In February, 1920, I had the flu. I didn't get over it for a long time and I've been miserable ever since."

A routine examination conducted by college clinician revealed the following:

Physical Findings: General emaciation and other evidences of profound trophic disturbances. Extreme irritability of the nervous system. Large soggy liver. Ptosis of stomach and transverse colon. Considerable quantities of fecal matter in the large gut. A general sub-acute pelvic inflammation.

Osteopathic Pathology: Occiput anterior on right and side-bent to same side; mobility of atlanto-axial articulation markedly reduced; second, third, and fourth cervical vertebrae anterior on the right; sixth, seventh, eighth

and ninth dorsal vertebrae side-bent and rotated to right; eleventh dorsal posterior; second and third lumbar vertebrae anterior. There was also a marked diminution of the physiological curvatures of the spine and it was abnormally rigid.

Diagnosis: Malnutrition and general progressive toxemia resulting from faulty and insufficient elimination.

Treatment: After considerable soft-tissue work designed to overcome the resistance of the erector spinae mass and associated musculature, specific treatment to the specific bony-lesions was administered. In addition a general treatment for the purpose of "limbering up" the patient's spine was given. Cervical lesions were reduced with considerable difficulty and are not yet fully adjusted. Articulations involved probably never will regain their normal mobility. Other lesions noted responded readily to treatment.

Results: Patient came to college clinic seeking relief from her general physical condition. She had no hope of having her hearing restored. She has received three treatments weekly since her entrance into the clinic. Condition is remarkably improved; practically all of the subjective symptoms complained of have subsided; she has gained considerable weight; and her appearance is changed very much for the better. Deafness was regarded as permanent, hence no particular attention was given to it; but it was not ignored and as a result of the normalization of the cervical lesions, she is regaining her hearing. After fourth treatment she heard her own voice for first time in fourteen years; hearing has steadily improved, until she can now carry on a conversation with her eyes closed (she is a lip reader), although it is still necessary for her conversant to raise his voice decidedly.

Prognosis: As to general health, splendid. Complete restoration of hearing is problematical, but if improvement continues at present rate, there is no reason for not believing that the affliction will ultimately become negligible.

Chicago College of Osteopathy

The following discussion and reports of cases are made by members of faculty:

The Senile Prostate

When we consider that in thirty-five per cent of all men past sixty years of age there is an hyperplastic enlargement of the prostate gland and we remember how closely the prostate hugs the urethra at its junction with the bladder, we are not surprised that this troublesome organ should frequently obstruct the outflow of urine and be the cause of a long train of bladder and urinary symptoms in the aged. It is true considerable enlargement of the prostate may occur without any subjective symptoms but fully as often a slight enlargement may make life a burden.

The presenting symptom is always that of obstructed urination and may vary from an increased frequency by day or night or by a continual dribbling to an absolute retention of urine. Pain may or may not be present. But in most cases it is present as the obstruction increases, presenting indefinite pains in the groins and over the bladder and a sense of fullness in the perineum. With the increased obstruction, likewise there will be an increase in residual urine, and even in those cases showing constant dribbling catheterization may prove that the bladder has failed of emptying by as much as twenty or thirty ounces. Many patients at this stage will begin "catheter life" and may show a surprising toleration to the daily use of this instrument. More often the beginning of the use of the catheter marks the beginning of infection of the bladder. Extension to the ureters and finally to the kidneys may cause a pyelonephritis and a urinary septicemia which will result in death.

The symptoms as presented will point to hypertrophy of the prostate and confirmatory diagnosis may be had by rectal examination which will disclose the enlarged prostatic mass and by the cystoscope which will exclude vesical stone, tumors, etc.

When seen early much comfort may be given these patients by hygienic and palliative treatment. The diet should be plain and free from rich seasoning. The bowels should be kept regular. Cathartics should be avoided with the possible exception of paraffin oil. Moderate outdoor exercise will be of benefit. Exposure to wet and cold must be avoided. Osteopathic treatment should be directed toward draining the congested pelvis and massage of the prostate locally through the rectum. Gentle massage properly given may aid greatly in overcoming the vesical irritation and consequent desire to micturate. When there is residual urine the bladder should be catheterized care being taken, however, to observe strict asepsis as infection will add greatly to the patient's difficulties.

It must be remembered that a hyperplastic prostate is a true enlargement and that palliative treatment may fail to retard the symptoms and probably will never entirely cure. Nevertheless palliative measures should always be attempted, and if found ineffectual and the patient gradually fails in spite of it, then operative treatment looking toward the removal of the gland is indicated.

Operative measures taken in the face of the many organic degenerations due to old age must always receive serious consideration. However, surgery of the prostate has made rapid advance in the past few years and with greater knowledge concerning preparatory treatment the operation of prostatectomy shows a surprisingly low mortality. The

gland may be removed through the perineum or suprapubically. The latter method provides opportunity to examine the interior of the bladder and also results in a lower mortality. It is the operation of choice with the majority of surgeons today.

To the two-step suprapubic operation can be credited much of the success of modern prostatic surgery. The first step consists merely in opening the bladder and draining it through a tube which is left inserted. At a later date, generally seven to ten days after the first operation, the prostate is enucleated. Drainage is again established and later by routine measures the bladder opening is closed.

Two cases are presented as follows:

Farmer. Age 80. Had actively supervised management of 260 acre farm up to month before seen by me (April 1919). No venereal history.

History of gradually increasing obstruction for past five years. Had been traumatized during catheterization a month before. Examination showed almost constant dribbling of small amounts of urine. Bladder distended and above umbilicus. Complained of pain in glands, penis and in perineum and groins. Continually straining in effort to void. Drowsy but pain kept him moving about. Attempted to pass a small rubber catheter. Failed. Removed sixteen ounces of urine through a metal catheter. In the container this proved to be about one-third pus and mucus. Patient was averse to operation. Saw him daily for one week. Uremic poisoning symptoms increased. At this time he consented to operation and the bladder was opened and drained. The third day he brightened perceptably and continued to gain in strength until the eighth day when the prostate was removed by finger enucleation. Made uneventful recovery and is quite active at this time.

Jeweler. Age 64. No venereal history. History of frequency for two years. No dribbling. Had been chilled during a hundred mile auto trip. As he said, he "congealed." Acute retention followed. Osteopath had been called to treat retention. Failed to pass rubber catheter.

First seen by me September 28, 1920. Patient very anxious and straining to void. Pain in perineum and over bladder. Passed metal catheter and obtained twenty ounces of urine. Did not empty bladder. Patient relieved of all pain after catheterization. Heat was applied to perineum and hot tub bath ordered. Treated by osteopath for two weeks but daily catheterization was necessary.

Symptoms of urinary septicemia caused him to be taken to the Chicago Osteopathic Hospital. On October 19th the bladder was opened and drained. October 28th the prostate was enucleated. Bladder opening was a little slow in closing. Recovery otherwise uneventful except that two weeks after returning home patient developed a mild epididymitis which lasted one week. He is now carrying on his jewelry business in this city.

These cases were both operated on under nitrous oxide and oxygen anesthesia.

G. E. MAXWELL, D.O.

Asthma

Male, white, 68, came under our observation recently. Briefly, history is as follows: The trouble began fifteen years ago with a feeling of depression in the chest, shortness of breath resolving into a very distressing dyspnoea. The attack lasted for several hours and was followed by profuse expectoration of mucus and copious sweating. These paroxysms continued daily for about six weeks. A similar attack occurred in each succeeding year.

Examination showed the following: Typical asthmatic chest. The upper dorsal was tightly contracted, the contraction extending around the chest. The ribs on the right side were elevated and closely approximated. There was marked tenderness on the right side at the sterno-costal junction, and the musculature of the neck was contracted evenly on both sides. Marked rotation of the atlas on the occiput with no apparent displacement of the other cervical vertebrae. Examination of the throat revealed an extreme sensitiveness with an anemic condition of the membranes and small nodular masses on the posterior pharynx.

The nose showed anemic membranes with a long, thin, sharp spur on the septum extending back as far as the posterior tip of the inferior turbinate at which point it met the inferior turbinate extending into it about two mm. The touching of the area with a cotton swab caused violent coughing, sneezing and marked dyspnea.

Examination of the sputum following the paroxysm showed small mucus masses, grayish white in color (Laennec's pearls), containing the two characteristic elements—Curschmann's spirals and the Charcot-Leyden crystals.

Blood findings were negative excepting a marked decrease in hemoglobin. Urine negative. Blood Pressure: Systolic 117; diastolic 69.

Diagnosis: Bronchial Asthma.

Treatment: Operation for removal of the spur was refused. The mucus surfaces at the point of contact were eroded with a sharp curette. A small gauze pack was placed between them to insure separation of the opposing surfaces, packing being changed daily.

Careful osteopathic treatment was given. Diet was modified, the starches and sugars being eliminated. Patient made a speedy recovery, the attack terminating at the end of three instead of the usual six weeks.

GLENN S. MOORE, D.O.

SPECIAL R. R. RATES TO CLEVELAND MEETING, JULY 25-29

Massachusetts College of Osteopathy

Mechanics of Rib Lesions

The costo-transverse articulations and the articulations of the ribs are arthrodial in character. The heads of the ribs are bound down to the bodies of the vertebrae very tightly by the radiate and interarticular ligaments but allow a slight gliding movement. The same holds true of the costo-transverse articulations.

Movements may be classified as follows: (1) Pump handle; (2) Bucket handle; (3) Combined pump handle and bucket handle; (4) Enarthrodial.

Pump Handle Movement. In inspiration and expiration the rib revolves on a transverse axis drawn through the costo-transverse and costo-vertebral articulation. This results in a rotation of the neck of the rib on a long axis, the tubercle and head of the rib acting in a hinge like manner, the latter having also a screwing motion. This movement increases the antero-posterior diameter of the thoracic cavity and does not materially affect the transverse.

Bucket Handle Movement. In inspiration and expiration the movement is a rotation on a plane through the costo-transverse and costo-sternal junction. The rotation in the costo-transverse articulation is such that the tubercle moves upward, backward and medialward. The head of the rib moves downward, outward and backward.

From the costo-vertebral to the costo-transverse articulation is the short lever of the rib. From the costo-transverse to the costo-sternal articulation is the long lever. This movement causes an increase in the transverse diameter of the thoracic cavity and a decrease in the antero-posterior diameter unless associated with the pump handle movement.

Combined Bucket Handle and Pump Handle Movements. This movement is a combination of both the pump handle and bucket handle movements with an increase in all diameters. The primary motion is a pump handle movement and this is followed by the bucket handle movement.

Enarthroidial Movement. This refers to those ribs having free anterior extremities with corresponding slight movement in all directions, i.e., the 11th and 12th floating ribs.

According to their attachment, ribs are divided into 3 classes: (1) Vertebro-sternal or true ribs (7 in number); (2) Vertebro-chondral: articulating with the ensiform (3 in number); (3) Vertebral or floating ribs (2 in number).

Vertebro-Sternal Ribs. The 1st rib: Forced inspiration produces a pump handle movement causing the sternum to be carried upward and forward. The head is very movable and has no interarticular ligament.

The 2nd rib: The sternal attachment is less rigid and the middle of the rib can also be drawn up allowing slight increase in the transverse as well as the antero-posterior diameter.

The 3rd, 4th, 5th, and 6th ribs: These ribs are elevated by a combined pump and bucket handle movement increasing all diameters. The primary motion is a pump handle movement and this is followed secondarily by a bucket handle movement.

Vertebro-Chondral Ribs. (the 7th rib is included in this group). The 7th, 8th, 9th and 10th ribs: These are elevated by a bucket handle movement only increasing the transverse and the lateral antero-posterior diameters but decreasing the medial antero-posterior diameter.

Vertebral Ribs (11th and 12th or floating ribs). These ribs have enarthrodial joints and are capable of slight movement in all directions. They are depressed when others are elevated to form fixed points for the action of the diaphragm.

Lesions of the Ribs. The 1st rib: The depressed first rib is a lesion wherein the rib is depressed anteriorly with upward and backward rotation posteriorly on the transverse process of the first dorsal vertebra.

Theoretically forced inspiration should be able to produce an inspirational pump handle lesion wherein the rib would be elevated anteriorly with downward, backward rotation posteriorly on the transverse process of the first dorsal vertebrae.

In my experience, however, I have not as yet found one. The former lesion is usually due to posture, trauma, or forces of gravity.

Inspiration Lesions. An inspiration lesion is any rib 2nd to the 10th inclusive, maintained in forced or exaggerated inspiration. The axis of rotation of the lesion depends upon the particular rib involved.

Expiration Lesion. Is any rib 2nd to the 10th inclusive maintained in forced or exaggerated expiration. The axis of rotation of the lesion depends upon the particular rib involved.

Lesions of the 2nd to the 6th Rib Inclusive. These can be divided into two general headings, Inspirational and Expirational.

(1) *Inspiration Lesions* may be either of the following: (a) Pump handle; (b) Bucket

handle; (c) Combined pump and bucket handle.

(2) *Expiration Lesions.* The same lesions may occur in expiration in reverse form.

Lesions of the 7th to the 10th inclusive are either inspirational or expirational. The axis of movement is bucket handle in character, making lesions of this area bucket handle lesions.

Lesions of the 11th and 12th *ribs* may be in any direction as the above ribs have little movement in any direction. The most common lesions are as follows: (1) Depressed and rotated on long axis with the free end downward and the upper border outward, and the lower border inward. (2) Elevated and rotated on the long axis with the free end upward, the upper border inward and the lower border outward.

Inspiration Bucket Handle Lesions may occur in any rib, second to the tenth inclusive, and is more common in the 7th, 8th, 9th and 10th ribs. The movement is on an axis drawn from the costo-transverse articulation through the sternal junction. The rib bulges laterally, the outer surface moves upward and outward, the lower border turns outward and the upper border inward. There is a separation below with the adjacent rib, and is approximated with the ribs above.

Expiration Bucket Handle Lesions occur in the same ribs but the movement is reverse of the above causing the outer surface to move downward and outward, the lower body to turn inward and the upper border to turn outward. There is separation with the rib above and an approximation with the rib below.

Inspiration Pump Handle Lesions affect the 1st to the 6th rib inclusive. The movement is a rotation on a transverse axis drawn through the costo-transverse and costo-vertebral articulations. The rib is elevated and slightly thrust forward anteriorly with a downward and backward rotation of the neck of the rib on its long axis.

Expiration Pump Handle Lesions occur in the same ribs with a reverse rotation causing the rib to be depressed anteriorly with upward and backward rotation of the neck of the rib on its long axis.

Combined Pump and Bucket Handle Lesions may occur in any rib, the 2nd to the 6th inclusive. The movement takes place on both axes (pump and bucket handle), causing combined diagnostic features of bucket handle and pump handle lesions. Combined lesions may be inspirational or expirational, the rotations and movements of one being the reverse of the other. (*Note*) The causes of inspirational rib lesions may broadly be considered as inherent dynamic forces of the body, i.e., muscular contractures, etc. The causes of expirational lesions may be broadly considered as external dynamic forces, i.e., trauma. Vetrebral lesions may or may not be associated with rib lesions.

C. HARRISION DOWNING, D.O.

Current Literature

G. V. WEBSTER, D.O., *Editor,* Carthage, N. Y.

WITH the success of osteopathic measures applied to the relief of the symptoms arising in Grave's disease, the number of cases under osteopathic care that reach the surgeon is comparatively small. The points upon which surgery is advised or contra indicated from a medical viewpoint are interesting to note. Dr. Isreal Bram, (*New York Medical Journal,* February 19, 1921) gives the following as a summary to his article on "Exophthalmic Goitre and Surgery."

Surgery is indicated in Grave's disease when:

1. Marked pressure symptoms of cervical and thoracic structures are evident.

2. Malignant degeneration of the thyroid occurs. (Marked pressure symptoms and malignancy are unusual occurrences during the course of thyroid hyperplasia.)

3. A local structure (tonsils, appendix, pelvic abnormalities), which, by a careful process of exclusion, is found to have an etiological bearing on the syndrome. Surgical removal of such diseased tissues, in breaking the continuity of the vicious circles upon which the symptom complex depends, may bring about a cure.

Surgery is contraindicated in the vast majority of cases of Grave's disease, for,

1. The pathogenesis of the disease points to the thyroid as playing but a small part in the causation of the syndrome.

RESERVE JULY 25-29 FOR CLEVELAND A.O.A. MEETING

2. The symptomatology of the affection is as widespread as the body itself, favoring strongly the pluriglandular theory.

3. Physiology indicates that, in the human being, it is almost as dangerous to attack surgically an overactive vital organ, such as the thyroid, as to attack surgically an overactive heart.

4. On clinical grounds, Graves's disease does not fall in the realm of surgery, as indicated by the considerable mortality rate, frequent operative accidents (e.g., myxedema, tetany, vocal paralysis), postoperative sequellae (acute exacerbations, acute psychoses), recurrences, and the lack of conclusive proof of complete surgical cures. As has been suggested, surgical interference with the thyroid, by reducing the recuperative powers of the patient, prolongs the state of invalidism and favors profound degenerative changes of the tissues of the circulatory and nervous systems, rendering the prognosis less favorable and the task of the internist tedious.

5. On empirical grounds, Graves's disease belongs strictly in the field of the internist who, having made endocrinology his field of special endeavor, is capable of demonstrating compete and permanent non-surgical cure of every case of the disease in which the vital structures are not badly damaged and a reasonable degree of co-operation is obtainable.

Medical Record (Feb. 19, 1921), comments editorially on data tending to show the relation of encephalitis as a sequence of influenza.

There was a pandemic of influenza in Europe during the period of 1709-1712, and it was in the latter year that the first episode of encephalitis was recorded. In 1846-1848 there was also a pandemic of influenza which ravaged Europe, and in 1846 Dubini described what seems to have been the myoclonic form of encephalitis. During the pandemic which raged in Europe from 1889 to the early nineties, the disease **nona** appeared in Italy and Austria. In all of these cases influenza seems to have preceded the brain disorder or at least did not follow it; but during the last pandemic the "sleeping sickness," as it was then called, seems to have preceded the grippe, for it began in the winter of 1916-17, while the influenza did not gain headway until the spring of 1918. At least this is true of the cases seen in Vienna by Economo and Pribram. But we must remember that a large fraction of the incidence of the encephalitis, and especially is global diffusion, distinctly followed the influenza, appearing in the winter of 1918-19.

Moreover, it is certain that the onset of the influenza pandemic goes back beyond the spring of 1918, although how far we cannot state. Encephalitis appeared in Europe outside of Austria in the winter of 1917-18, when its appearance was noted in both France and England. The Swiss authors are not disturbed by the apparent reversal of priority in the last appearance of the two maladies, for it is not at all inconceivable that influenza was active for a long time before the great outbreak in May 1918.

The *Journal of Experimental Medicine* (Mar. 1, 1921), Olitsky and Gates, giving a summary of their experimental work for the indentification of the influenza bacillus had these observations to report:

An active tansmissable agent present in the nasopharynx in early cases of influenza has been found to produce definite and characteristic clinical reactions and pathological effects in rabbits as already described in an earlier publication.

The experiments here reported indicate that this active agent has the following properties:

1. The agent as it exists in the nasopharyngeal secretions in man, and in the lungs of rabbits injected with the human secretions, passes through Berkefeld V and N candles.

2. The filtered material produces the same effects on the circulating blood and on the lungs of rabbits as the unfiltered material.

3. The peculiar effects described as arising in the inoculated rabbit may also be induced in guinea pigs inoculated with the agent.

4. The agent responsible for the reaction on the blood and the lungs of rabbits withstands the action of glycerol in a sterile 50 per cent solution, for periods up to 9 months. The question must be left open at present whether the agent can withstand longer contact with the chemical. In two experiments after 10½ months contact the agent induced no observable changes in the blood and lungs of rabbits.

Dr. Geo. W. Crile, *Journal A. M. A.*, Jan. 15, 1921, in an article on shock and exhaustion, presents the following data and deductions under the subheading, The Brain as an Energy-Transforming Organ.

Environment, external and internal, drives the brain; and the brain either directly or indirectly drives the entire organism. Is the brain tissue itself a transformer of potential energy into kinetic energy, and does it drive the body by means of some familiar form of energy which it creates, or does the brain drive the body as a mystery organ obeying no physical laws? Is the brain capable of exhausting itself primarily by its own excessive work, or is it only secondarily exhausted?

Do the brain cells transform much or little energy? Are they active or inactive cells? That the brain transforms potential into kinetic energy, and by means of that energy drives the body, is shown by the want of power of action when the head is cut off. That the brain is not only an active, but the most active energy-transforming organ of the body, is held by Mathews.

The work of the brain is greater in proportion to the weight of its tissue than is the work of any other organ of the body. Alexander and Cserna state that the brain shows a con-

sumption of 0.360 c.c. of oxygen er grain minute, while voluntary muscle shows a consumption of only 0.004 c.c. of oxygen per gram minute. According to these observers, a given weight of brain tissue transforms energy about ninety times as rapidly as an equal weight of the voluntary muscles in the quiescent state. The voluntary muscles constitute 42 per cent of the weight of the body, the brain 2 to 3 per cent. Hence, according to the findings of Alexander and Cserna, excepting when active, the brain has a total metabolism five times greater than the metabolism of all the voluntary muscles together.

From these facts, we conclude that the brain is an organ of intense metabolism. Are the brain cells safe-guarded against the factors of exhaustion?

It would appear that the brain cell is evolved stripped to its decks, to fight the battle of life; as if its function as an energy-transformer were so important that certain means of defense are withheld from the brain cell and provided for it by other organs, for example, protection against intracellular acidosis, against want of oxygen, against want of food. It would seem, therefore, that these vital functions are committed to other organs. The vast volume and distribution of blood in the liver, in the lungs and in the kidneys provide for the rapid elimination of waste which is urgently necessary, especially for the safety of the brain. The extreme avidity of the liver cells for acid metabolites, coupled with the immense cellular surface exposed to the blood stream, we conceive to be one of the greatest safeguards to the brain against acidosis. The large storehouse of sugar in the liver serves as the fuel depot for the brain and as a protection against want of anaerobic oxygen. The blood stream carries oxygen and sugar to the brain; the buffer substances of the blood are a continuous protection to the brain against intracellular acidosis. **The brain cells may be conceived as having their protective and nutritive cytoplasm evolved to function at a distance.**

Cervico-Brachial Neuritis is the title of a five-page article in *Medical Review of Reviews* by Dr. L. L. Draper which is osteopathic from first to last although osteopathy is not credited with either the philosophy nor the findings. I believe that Dr. Draper is an osteopath, although not a member of either the national or New York State Associations. Any one at all familiar with osteopathic principles would have little difficulty in recognizing osteopathic treatment under a sub-heading of the article, entitled Diagnosis. This may be one way of enlightening the medical profession and they may take to the osteopathic idea when camouflaged in one of their journals, but I believe it better for osteopathy and osteopaths to stand under their own colors without attempting as in this article to conceal the source of the idea of structural adjustment.

Examination is made by palpation as the patient is seated. Lateral subluxations are often visible when the patient bends his head forward as far as possible and folds his arms. This accentuates the line of spinous tips, and the tip of the seventh cervical may be seen to the right or left of that of the first dorsal vertebra. When normally adjusted the tips of the spines are in the same straight line. It is a simple matter to feel changes in their relation to each other. I often make the examination as the patient lies on his side either on my table or a couch or bed, supporting the head with the palm of my right hand as I sit in front of him and palpating with the fingers of my left hand. It is in this position that adjustments for lateral subluxations are made. The head is lifted sharply at the same time that pressure is exerted against the side of the seventh spinous tip and readjustment occurs with a perceptible noise. The sixth cervical vertebra is adjusted as the patient lies either upon his stomach or back, in the former case by the application of the ulnar side of the hand against the base of the neck. The wrist of the applied hand is grasped by the other hand to aid in the adjustment, and correction is obtained by a sharp thrust. Or when the patient is supine the head may be side-bent to the side opposite to that in which the sixth cervical spinous tip is found to have moved, and then by a quick twist and rotation to the other side the joint is unlocked and by an inward thrust the vertebra is replaced.

The question of diet in cases of arterio-sclerosis has presented a problem not easy of solution. The following extract from the *Gazette des Praticiens* (Nov. 15, 1920), gives a few practical suggestions for the dietetic care of this condition.

Relation of Intestinal Fermentation to Arterio-sclerosis—Lemoine has been impressed with two features in respect to arteriosclerosis. The first is the presence in arteriosclerotics of intestinal fermentation, while the second is the unusually large bulk of the stools. The first of these is known to the profession, but the second seems to be unknown. In well-marked arteriosclerotics the act of digestion seems to increase the malaise. This has led to the recommendatior of small and frequent nontoxic meals. Among the disturbances which one seeks to prevent by feeding are dyspnea, migrainous attacks, and insomnia. When these are present the intestinal functions will be found to be disturbed, and, the author believes the consequence is the absorption of a poison which affects especially the nervous system. The presence in the urine of indican and urobilin in these subjects is an index of this absorption. In dieting these patients milk is freely used, and the author believes unwisely.

It is taken in large quantities at times, and favors constipation and bloating. Given because of its supposed freedom from toxic matter, it leads to increased indican in the urine, and if there is albuminuria it aggravates that condition. The author replaces the milk and egg diet with a vegetarian regimen and with good results. The custom of giving white meats is also deprecated, these being equally harmful with the red, being difficult to digest and too rich in cholesterin. According to Chauffard this substance furnishes the makings for the deposits in the vascular walls.

The osteopathic profession is apt to find lesions where a previous diagnosis has been hysteria. However, hysterical symptoms are not impossible and the following description of "Hysterial Shoulders" by Dr. W. P. Cones (*Boston Medical Journal,* Feb. 17, 1921), provides the viewpoint of medicine in such cases. It would be interesting to know in just what percentage of the cases of "Hysterical Shoulder" an osteopathic examination would reveal a definite structural lesion.

Hysteric shoulders occur quite commonly after injury, men being affected as well as women. Sometimes they occur after trauma which was definitely too trivial to cause such symptoms as are afterwards complained of, and sometimes they follow a definite injury, as a bursitis. The recognition of the hysteric element is important. After seeing and recognizing a few of these cases, one can suspect the probable nature of the trouble when the patient first steps into the office or clinic. Many times we find the arm and shoulder swathed in flannel and bandages, and the greatest care is taken in removing them. The mental attitude of the patient often gives us a clue. They complain bitterly of pain before the shoulder is touched, and have suffered many things from many doctors. On examination they often resent the lightest touch, though it would be impossible for it to cause pain. The shoulder is usually held immovable, the hand hanging at the side. Any movement of the elbow, humerus, or shoulder as a whole is resisted. The patient will not move the part actively at all. There is usually no atrophy of muscles, and nutrition of the arm and shoulder is good. Despite the great pain, the patient usually eats three good meals a day. In performing the simple test for sensation by pin prick, we find total anaesthesia of the shoulder, arm and hand, together with anaesthesia of the back and chest to the middle line in many cases. Such findings with no atrophy, and the characteristic attitude with lack of any bony lesions, make the diagnosis practically positive. Sensation tests should never be neglected in the examination of chronic shoulder cases, as without them many cases are overlooked, and a definite traumatic condition is diagnosed, when we have to do with pure hysteria.

Dr. A. L. Bloomfield (*Johns Hopkins Bulletin,* February 21) closes a lengthy article giving the data found in the cultural examination of the throat secretions of a number of cases, with this discussion, which supports the osteopathic theories relative to the normal immunity of the healthy individual.

It appears that cultures made repeatedly from the throat of the healthy individual over a considerable length of time reveal two groups of organisms. In the first place there is a group—non-hemolytic streptococci, and Gram-negative cocci—which is constantly present and seems to constitute the true normal flora of the throat in the sense of actually living its complete life history in that environment. In addition to this group many other organisms may be recovered in cultures from normal throats but their presence seems to be only transient. They disappear within a few days, as a rule, just as foreign organisms do when experimentally introduced. It is possible that some of these organisms such as pneumococci and influenza bacilli are really constant inhabitants, but are present in such small numbers that they were missed in some of the cultures, but this seems unlikely. We may picture, therefore, in addition to the true basic flora a constant influx of various bacteria from the skin, the nose, the air, and from external objects. These, unless they are pathogenic and set up disease, seem to be promptly disposed of by the normal protective mechanism of the upper air passages (chiefly mechanical flushing.) The idea, then, that bacteria in general, when introuced into the upper air passages are likely to colonize and live there indefinitely is erroneous. It is now clear, both from these studies and from the experimental work, that the normal surfaces of the upper air passages afford a very unfavorable environment for foreign organisms, both pathogenic and non-pathogenic, and that special conditions are needed to make possible their prolonged or permanent presence. Such conditions as a rule consist of the production of disease, or at least a focus of diseased tissue in which the organisms may colonize.

With these points clearly in mind it seems that one is in a much better position to study the bacteriology of infections of the upper respiratory tract. Knowing the normal flora, and the possibility of transient invaders, unessential organisms may be readily discounted. A study of the bacteriology of colds is now being taken up from this point of view.

Conclusions

I. The organisms present in the throats of healthy people, as revealed by this method, fall into two groups:

(a) The true normal flora including non-hemolytic streptococci and Gram-negative cocci, and

(b) Pathogenic or non-pathogenic organisms which are accidentally introduced and

are present usually only a short time in a given individual.

II A true picture of the normal flora is obtained only by making repeated cultures from the same individual.

BOOK REVIEWS

Dermatology, The Essentials of Cutaneous Medicine. By Walter J. Highman, M. D., Chairman, Section on Dermatology, American Medical Association; Associate in Dermatology, Mt. Sinai Hospital, New York; Associate Professor of Dermatology, New York Post-Graduate Medical School and Hospital. Octavo of 482 pages. Illustrated. New York: The Macmillan Company, 1921. Cloth, $6.00 net.

The author has performed an excellent service for both the beginner and the general practitioner. An outline of cutaneous medicine is presented without omitting essentials and important details. Emphasis has been placed upon the etiology, developing the subject so far as present knowledge allows from the standpoint of internal medicine. This is a feature that will be heartily welcomed by the general practitioner, which marks a distinct advance in the literature of dermatology. We believe this is a groundwork that will prove of special value, for although there are skin diseases that are due to local conditions, still there are many disorders that bear a definite causative relationship to metabolic or biochemic disturbances. Various tables have been compiled from the standpoints of causative factors and relationship, keeping in mind the conditions that are local as well as the skin lesions that present systemic reaction, whether of primary or secondary manifestations. Thus the interrelationship of the integument to other organs is not lost sight of, which seems to be the case in many special works.

Surgical Therapeutics and Operative Technique.. By E. Doyen. English Edition. Prepared by the author in collaboration with H. Spencer-Browne, M. B. Cantab, etc. Eleve de l'Institut Pasteur; Physician to and Chef de Clinique de l'Institut Doyen. In three volumes. Vol. 3 Regional Surgery (continued) Operations on the Abdomen. 811 pages. Illustrated. New York: William Wood and Company, 1920. Cloth, per set 3 Vols. $35.00.

The third volume completes the English edition of this excellent work. The sections include operations on the abdomen, peritoneum, liver and bile passages, pathology and surgery of the stomach and intestines, operations on the genito-urinary organs of man, and operations on the female generative organs. There is an outline of the author's researches into the physiology of the stomach and gastric digestion. The work is notable for a wealth of detail, richly illustrated, depicting the labor of a master who greatly influenced contemporary surgery.

Tuberculosis of Children. Its Diagnosis and Treatment. By Dr. Hans Much, Director of the Department for the Science of Immunity and for the Research of Tuberculosis at the University of Hamburg, Germany. Translated by Dr. Max Rothschild, Medical Director of the California Sanitorium for the Treatment of Tuberculosis, San Francisco and Belmont. 156 pages. New York: The Macmillan Company, 1921. Cloth, $2.50.

The first part is devoted to Much's theories of immunity, relating to his research work and deductions. He believes that the chief source of danger is because the child lives in a tubercular environment; and that "wherever tuberculosis is found, it has started in first years of childhood, and that during this age most people pass through a tuberculous infection." The second part relates to diagnosis and treatment. In the majority of cases the first and principal site of localization is the bronchial glands. He stresses the importance of early diagnosis, calling into service various tests, clinical, radiological, bacteriological and biological. The discussion of biological methods in both diagnosis and treatment is especially enlightening as to comparisons and definite conclusions. Prophylaxis and individual treatment, embracing both special and general measures, are interestingly described. The volume is well worth a careful study.

The Surgical Clinics of North America. (Phil. Number, Feb. 1921.) The Surgical Clinics of North America (issued serially, one number every other month.) Volume I, Number I. By Philadelphia Surgeons. Octavo of 259 pages, with 112 Illustrations. Per Clinic Year (February-December): Paper, $12.00 net; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

In this initial volume Dr. Keen has written the Introduction. He tells of some of his experiences as a medical student (1860-62.) Speaking of using palpation, he says: "Palpation? Yes, and often far more thorough than today. There were shrewd clinicians who learned by touch, sight, and hearing, and not seldom also by smell, many facts of value which today are sometimes overlooked because of our too exclusive dependence on the laboratory to the detriment of our natural resources. Our senses have lost not a little skill for want of practice." There are clinical studies by Deaver on pancreatitis; Da Costa on hydatid cyst of the liver and several other disorders; Clark on prolapsus uteri; Frazier on trigeminal neuralgia; Gibbon on carcinoma of breast; and several other writers. The volume can be highly recommended as of assistance in keeping one abreast of current surgical thought and methods by well known clinicians.

STATE AND LOCAL SOCIETIES

California

A meeting of the Los Angeles O. S. on April 10, was given over entirely to the subject of the disabled soldier. Captain David Fallon spoke on "The Disabled Soldiers' Home Fund," and Dr. Warren Schilling discussed "How the Government Starved its Crippled Soldiers."

Georgia

Program features of the nineteenth annual meeting of the State O. A. on March 26 were: Summary by Dr. M. C. Hardin of business before the House of Delegates at the Chicago meeting of the A. O. A.; symposium by Drs. Nannie B. Riley, F. Muir Turner, H. M. Dawson, Mary E. Layne and S. C. Thurman on "The Thing I Learned at the A.O.A. Meeting in Chicago That Has Been Worth More to Me as a Practitioner;" "Brain Tumors, their Detection by Eye, Ear, Nose and Throat Symptoms," Dr. R. E. Andrews; "Technique," Drs. Frank L. Teall, E. K. Orrison and W. R. Aspley; "Dietetic Treatment in a Case of Articular Rheumatism," Dr. M. S. Fahrney; "Lumbar Pain, Etiology and Diagnosis," Dr. W. C. Goodpasture; "Experiences and Observations with the Emory Hospital Unit in the World War," Dr. A. A. Jelks; "Case Reports and Round Table Discussion," Dr. Elizabeth Broach.

Iowa

Annual convention I.O.A. will be held at Des Moines, May 18, 19, 20. A big jubilee program will celebrate the recent legislative success.

Idaho

The Eastern Idaho Osteopathic Society met March 23 at Dr. Van M. Bodmer's office, Pocatillo. Dr. W. Curtis Brigham, professor of surgery at the C. O. P. & S. of Los Angeles, Cal., was the guest of honor and appeared as the second speaker on the "Circuit Clinic" this year.

The afternoon was given over to clinical examinations by Dr. Brigham. The patients that came in for Dr. Brigham were brought a distance of 100 miles by Dr. Geo. A. Aupperle, of Idaho Falls.

Dr Brigham also gave some very interesting facts about "Differential Diagnosis and Blood Infusion."

A banquet was served at Hotel Bannock, at which a round table discussion took place.

Kansas

The Cowley County Osteopaths met in Arkansas City, Kansas, April 28th, for the purpose of organizing what is to be The Cowley County Osteopathic Association. Doctors in attendance were Dr. Ora Strother, Dr. T. W. Gibson, Dr. Nellie Light and Dr. Warren of Winfield. Dr. Ross Stephenson, Dr. L. M. Williams and Dr. L. E. Brenz of Arkansas City, Kansas.

The following officers were elected: Dr. Ora Strothers, of Winfield, Kansas, president; Dr. L. M. Williams, Arkansas City, Kansas, Vice-President; L. E. Brenz, Secretary, Arkansas City. Meetings to be held fourth Thursday in each month, Winfield and Arkansas alternately. The next meeting to be held in Winfield, May 26th.

Maine

The New England O. A. will hold a two-days' convention at Portland, on May 13 and 14. Among the speakers announced are Dr. L. Mason Beeman, of New York; Dr. Harry Sinden, of Hamilton, Ont.; Dr. Henry Carson, Jr., of Greenwich, Conn.; Drs. L. M. and Earl Bush, of Hartford, Conn.; Dr. L. E. Page, of Newport, Vt.; Dr. Mary Wheeler Walker, of New Bedford, Mass., and Dr. Oliver Sartwell, Dean of the Massachusetts College of Osteopathy.

A feature of the meeting will be the presentation to the Maine O. A. of a gavel in memory of Dr. Andrew Taylor Still. The donor of the gavel, made from wood taken from Dr. Still's room at Kirksville, is Dr. Alda C. Wentworth.

A banquet, followed by a meeting of the Portland (Me.) O. S. was held on April 14 and Dr. E. J. Hanes read a paper on "Principles of Habit." The banquet was the first enjoyed by the organization this year.

New York

At the meeting of the Osteopathic Society of the City of New York on April 16 at the Hotel Plaza, Dr. Franklin Fiske gave a review of last year's clinic work and demonstrations from the clinic were given by Dr. Roland S. Coryell, "Muscle Re-education;" Dr. Charles E. Fleck, "Delayed Mental Development in Children;" and Dr. Alexander Smith, "Two Interesting Heart Cases." Dr. Rebecca B Mayers, vice-president and superintendent of the Detroit Osteopathic Hospital, gave an interesting address on "Advantages of Having an Osteopathic Hospital in New York City."

Pennsylvania

The Central Pennsylvania Osteopathic Society met April 21st, 1921, at Harrisburg in the offices of Dr. E. W. Krohn. An excellent program provided food for thought and subjects for discussion.

Dr. Ira Drew, of Philadelphia, subject of "Eneuresis" commanded attention. Dr. Ruth

Deeter, of Rose Valley Sanitarium, Media, Pa., conducted a question box on "Reconstructing Tissue" through milk diet and osteopathic care. Legislative matters followed. The society will meet in June for the election of officers and to banquet.

Vermont

The semi-annual meeting of the Vermont State Osteopathic Association was held Wednesday, March 30th, at Montpelier. The Meeting was well attended and after a banquet at the Colonial the following program was carried out.

"Physical Fitness and The Osteopath," Dr. Veva E. Bullard; "Cardiac Lesions," Dr. Leon E. Page; "The 11th Fingure," (Euthenics), Dr. Dale S. Atwood; "Focal Infection," Dr. Harry A. Stevenson; "Modus Operandi," Sacro-iliac, Dr. Geo. D. Eddy; "Modus Operandi" (Cervical), Dr. J. H. Spencer; "Case Reports" Dr. W. W. Brook; "Our Problems," Dr. H. A. Drew.

NOTES AND PERSONALS

A Puzzle

(*From the Sandhill, N. C. Citizen*)

What seems at first glance, to be one of the most puzzling cases of State Legislation yet contemplated, is the restriction of the rights of the osteopathic profession to such an extent that these gentlemen will be obliged to either work under the direction of the medical profession or virtually go out of practice.

The physician's calling is one of the noblest professions in the world. The doctor is at the call of humanity every hour of the twenty-four. An eight hour day is unknown to him. For no matter what the weather, regardless of his own inclination or the state of his health, he does not hesitate to answer the call of the contagious case or refuse in the small hours of the night, to respond to the wail of the ailing infant or the gasp of the dying. He does not refuse to enter the plague stricken district when duty calls, nor does he hesitate to inoculate himself with deadly germs if necessary for the advancement of some new idea to relieve suffering humanity. The true doctor has the largest and kindest heart in the world. It is hard to understand why he is so loth to recognize and aid the struggle for a footing of the osteopath, since the object of both is the advancement of science as applied to the aid of suffering humanity and since the training and requirements of the D.O. are as severe as that of the M.D. it is unfortunate that the two lines of endeavor cannot collaborate for the common good selecting the mode of care and treatment according to the special requirements of the case. Any general practitioner might well envy the osteopath his methods that serve to take the place of setting on drug to catch another through the human system.

A science that refuses to countenance additional ideas or ignores what might take the place of some of its outgrown and obsolete practices or supplement its own ideas with additional help, would seem to be retarding its own advancement. Or a system of ethics that would allow a dying patient to suffer while its exponents perform the "dear Alphonse" act or refuse to continue attendance upon a case where the desperate patient grasps at one more straw, is beyond the contemplation of the average layman.

The doctor who bled his patient for all ills. and his successor who sealed him up in a warm room with the bed covers piled upon him and no water to quench his thirst, with countless bottles of remedies of various degrees of efficiency on the table at his bedside, has given place to the more enlightened man of science who opens the windows to let in the air and sunlight, establishes a clear tract through the patient, and after giving him a few simple rules of right living gives nature a chance to re-establish herself, as she will usually do if she isn't given that chance too late.

The osteopath who knows his business and exercises common sense, judgment and reason, is needed and his removal would be a distinct loss to any community. In certain cases he has done what his "should be" brother the M.D. has failed to do, and for the sake of these certain cases where he is invaluable, it does not seem right that he should be pushed to the wall.

Why Iowa Won

Three Reasons:
Conducted on a business-like plan.
Unity of purpose.
Co-operation.

Iowa has been trying for the past ten years to get a new osteopathic law on its statute books but failed each legislative session.

After some consultation it was decided that we were losing because we had not followed any definite plan and therefore we had no co-operation. Immediately we set about to conduct our state activity in a business-like manner.

The need of a new law seemed to be the unanimous opinion of the profession of Iowa and we set about to find the law to best suit our needs. This being their wish they gave the legislative committee and the officers

orders to get it with the assurance that **they were back or us to the man.** This was the kind of spirit we needed (co-operation). We did go after it and we got it.

Let me say that any state if organized on a business-like plan, having unity of purpose, co-operation, and their demands are fair and just, can go before any fair-minded legislature and **"put it over."**

H. J. MARSHALL, D.O.,
President Iowa Osteopathic Association.

New Sanitarium in Richmond, Va.

Plans are being formulated by Dr. Edwin H. Shackleford and Dr. George E. Fout, of Richmond, Va., and Dr. A. R. Tucker, of Raleigh, N. C., to establish an osteopathic sanitarium at Richmond. It will be the first institution of the kind in Virginia. Drs. Shackleford and Fout have been in practice in Richmond for twenty-one years. Dr. Tucker will remove to Richmond and engage in practice as a nose and throat specialist. The new hospital will have a capacity of twenty-five patients and will open about June 1.

Theatrical Bed at Chicago Hospital

The Board of Trustees of the Chicago College of Osteopathy voted at a recent meeting to set aside the receipts of the Benefit Concert as a partial endowment of a Theatrical Bed at their Hospital. This was done in compliment to Dr. Oliver C. Foreman, who managed the concert. The theatrical profession is "strong" for osteopathy. This bed will attract the interest of the players and their friends, and will be a splendid investment. Miss Blanche Bates, of the Famous Mrs. Fair Company, playing at the Blackstone Theatre at the time, worked to dispose of the boxes for the benefit, and personally addressed some 100 letters to the leaders of society in Chicago; Miss Jane Cowl, of "Smiling Through" as well as Nancy Gibbs and her sister, Dorothy, of "Monsieur Beaucaire" assisted at the bazaar given by the Woman's Auxiliary of the Hospital. Charles Marshall, Galli-Curci, Otis Skinner, Edythe Wynne-Matthison, Fred Stone, Elsie Janis, Blanche Ring, Julia Sanderson, Jane Richardson, Frank Carter, Billy Van, Helen Shipman, of "Irene" fame, are only a few who come to the writer's mind at this moment. Paderewski, Calve, Nordica, are a few of the early converts. We might go on and add Raisa, Namara, Frank La Forge, Godowsky and many others of the profession, all interested in osteopathy, and we can gain their support in our institutions by showing that we are willing to be of service in return, when our assistance is required. It is felt this Theatrical Bed is but a start, and it is hoped the Osteopathic profession will bring this to the attention of all their following who are in the theatrical and musical walks.

Chicago College of Osteopathy

The Annual Meeting of the Chicago College of Osteopathy was held in the college assembly room on Thursday evening, March 10.

The annual reports of the Dean, the Superintendent of the Hospital, the Secretary, the Treasurer and the Women's Auxiliary all showed very substantial and satisfactory gains during the past year.

At the election of trustees, in which all Life and Active members had a voice by means of voting by mail, Dr. H. H. Fryette was elected to fill out an unexpired term until March, 1924; A. M. Clement and Dr. S. V. Robuck to March, 1925; and Perry S. Patterson and Dr. E. S. Comstock to March, 1926.

The officers who were elected were President, Dr. Geo. H. Carpenter; Vice-President, Dr. Jessie O'Connor; Secretary, Dr. E. S. Comstock; Treasurer, Dr. Fred Bischoff.

The following are the members of the Board of Trustees for the year 1921-1922:

Representing the Life and Active Membership,—Dr. Geo. H. Carpenter, Dr. Jessie O'Connor, Dr. E. S. Comstock, Dr. Fred Bischoff, Dr. O. C. Foreman, Dr. J. Deason, Dr. H. H. Fryette, Mr. A. M. Clement, Dr. S. V. Robuck and Mr. Perry S. Patterson.

Representing the Illinois Osteopathic Association—Dr. C. P. McConnell, Dr. C. E. Medaris, Dr. Hal. W. Shain, Dr. James M. Fraser and Dr. C. E. Tilley.

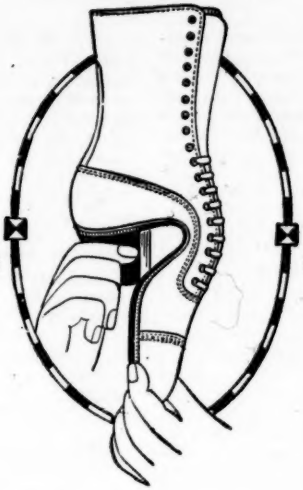
Dean Jerome H. Raymond is ex-officio a member.

The faith and progress of the Chicago College of Osteopathy is not better shown than by the interest manifested by the student body. Steps have been taken to establish a real A.O.A. Auxiliary, one of greater value to the A.O.A. and the college than ever before has been attempted. And this spring, already two of the student organizations, the Atlas Club and Theta Psi Fraternity have purchased permanent homes for their members. The acquiring of properties by student organizations establishes their faith in the institutions, and assures the college of their further report.

Says Prohibition Has Decreased Insanity

"Insanity in the United States has been decreased as much as 60 per cent since prohibition went into effect, and within five years' time crime will be diminished to a great extent because of prohibition," asserted Dr. A. G. Hildreth, president of a sanitarium at Macon, Mo., when speaking before the Osteopath Association in the Hotel Adelphia.

"The reason for this remarkable decrease in insanity," Dr. Hildreth said, "is that the people of the nation are leading a more quiet life and the over-exertion of the nervous system, which is caused by the drinking of alcoholic liquors, has been done away with. People are taking more care of themselves, and by total abstinence their body is kept at a normal condition.



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Louisville—Boston Shoe Co.
Minneapolis—Cantilever Shoe Shop, 21 Eighth St., South.
New York—Cantilever Shoe Shop, 22 West 39th St.
Omaha—Cantilever Shoe Shop, 308 So. 18th St.
Philadelphia—Cantilever Shoe Shop, 1300 Walnut St.
Pittsburgh—The Rosenbaum Company.
Rochester—Cantilever Shoe Shop, 148 East Ave.
Seattle—Baxter & Baxter.
St. Louis—516 Arcade Bldg. (Opp. P. O.)
Syracuse—Cantilever Shoe Shop, 136 So. Salina St.
Washington—Wm. Hahn & Co., 7th and K Sts.

"Although there is a wave of crime sweeping over the country at present, this wave will subside gradually, until within five years' time it will seem only a ripple on the surface of life. The reason for the increase in crime is because men have not accustomed themselves to prohibition and will go out as bandits and rob and murder just to obtain money to pay the exhorbitant prices asked for alcohol." — Philadelphia North American.

Victory in North Carolina

After a hard fight a victory for osteopathy has been won in North Carolina. A bill known as the Medical Practice Act, ostensibly framed regulating all branches of the healing art was introduced by the medical fraternity. Alert osteopaths discovered that osteopathy was defined as "rubbing, massage and scientific manipulation," thereby eliminating privileges of minor surgery, obstetrics, and the like. The osteopaths had the bill amended exempting osteopathy as defined by law and it was passed with the amendment preserving the rights of osteopaths.

An Osteopathic Victory

Osteopathy, personified by Dr. E. B. Waters, of Winchester, Illinois, has come through victorious, in a case in which an attempt was made to prosecute Dr. Waters for practicing surgery and midwifery without a license to "practice medicine and surgery in all their branches." By order of the court a jury returned a verdict of not guilty. No evidence or testimony was needed on behalf of the defendant. This is the first case of the kind to go to trial in Illinois.

School Band at Sanatorium

An interesting event at the Still-Hildreth Osteopathic Sanatorium, Macon, Mo., on February 5 was a concert given by the military band of the American School of Osteopathy of Kirksville. Dr. H. V. Halladay is conductor of the band and one of the features of the program was an Hawaiian guitar solo, played by him. Dr. Teall, dean of the American School, had charge of the trip, which proved very enjoyable. The band was hospitably entertained at the sanatorium and the occasion was one to be remembered in the history of two well known institutions.

From Across the Sea

Some slight opposition has developed to passage by the senate of house bill 114, formulating rules for the licensing of osteopathic physicians. We are at a loss to understand why it should be so. Osteopathy is a recognized school of the medical profession and those who place their faith in it for treatment of their bodily ills form a very large proportion of the population of every community— "Honolulu Star Bulletin," March 8.

Women's Club Will Entertain

Dr. Helen Marshall Giddings, announces on behalf of the Women's City Club of Cleveland, of which she is a member, that the club will extend the courtesies for luncheon and tea to the women of the A. O. A. during convention week and the week preceding when, no doubt, many women will be attending the eye, ear, nose and throat clinics.

Osteopathic Masonic Club

Students of Des Moines Still College and osteopathic physicians of the city who are members of the Masonic fraternity have organized a club. It will aid in promoting a better understanding of Masonry among the members and furthering the science of osteopathy. The club has been named the Masonic Osteopathic Club of Des Moines and will be affiliated with the National League of Masonic Orders.

First Osteopathic Hospital Burns

The building in Kirksville on South Fifth Street in which Dr. Still opened his first hospital in 1895 was burned on Feb. 16. It had long been used as a rooming house. At the time of the tornado in 1898 it was the only hospital in Kirksville and many victims of the storm were treated there.

Personal

Dr. W. E. Waldo, President of the A.O.A., addressed the Seattle Rotary Club, March 24 with the subject "Seattle and you." He spoke on the same subject to the Publicity Bureau of the Seattle Chamber of Commerce on April 4.

Dr. William Clare Brown, of Waterville, Me., has been appointed examining physician of the Athletic Association of Colby College. Dr. Brown has been practicing in Waterville for the past ten years, and was recently appointed to the board of trustees of the Maine Osteopathic Association.

Dr. Clinton E. Achorn, ex-president of the Rotary Club of New York and present chairman of the club's committee which is studying the needs of the ex-soldier, is quoted by the New York Evening "Post" as saying:

"We have already found out that the work of the present Government agencies is wholly inadequate, and our attempts to help the ex-soldier have been greatly hampered by the lack of co-operation between such agencies as the Bureau of War Risk Insurance and the Public Health Service."

Dr. Sarah O. Emerson, St. Petersburg, Fla., announces the removal of her office from 442 First Ave. N., to the Central National Bank Bldg., where she will be associated with Dr. George O. Baumgras.

Dr. George M. McCole, president of the Montana O. A., announces the appointment of Dr. J. H. Strowd as chairman of the State Publicity Work.

Married

Dr. Frances Marie Axman and Dr. Lamar Kuy Tuttle were married in New Haven, Conn., on March 8. They are at home at 601 West 168th Street, New York City.

Dr. Charles Edgar Mills and Miss Bertha Gertrude Henshey of Kittanning, Pa., were married on March 30.

Drs. C. O. Jayne of De Soto, Mo., and E. Martha Hawkins, of Paragould, Ark., both members of the June '18 class, Kirksville, were married, April 2, 1921, at the home of Bishop Murrah, Memphis, Tenn. They will both practice in Paragould, Ark.

Born

On April 6, to Dr. and Mrs. Ward C. Bryant, of Greenfield, Mass., a girl, Janet Elizabeth.

Died

On April 2, at the family home, Lakeview Park, John Lapp, father of Dr. Irene Lapp, of Rochester, N. Y., aged 68 years.

APPLICATIONS FOR MEMBERSHIP

California

Cliff, Albert B. (L.A.), Citizens Sav. Bank Building, Pasadena.

Davis, Warren B. (N.I.O.), First National Bank Bldg., Long Beach.

Mason, Dwight R. (S.S.), Box 667, Taft.

Robie, Roland F. (L.A.), Taylor Building, Oakland.

Colorado

Beslin, Anna M. (A.), Hillman Bldg., Delta.

Head, Ralph B (A), Empire Bldg., Denver

Florida

Dye, Arthur M. (A), 116 King Street, St. Augustine.

Dr. Sarah O. Emerson, from 442 First Ave. N., to Central National Bank Building, St. Petersburg, Fla.

Georgia

Trimble, Hoyt B. (A), College Park.

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Indiana

Montague, Chas. C. (A), American Trust Bldg., Evansville.

Iowa

Rinebarger, J. W. ( ), Keosauqua.
Roberts, Kathryn, (A), Bedford.
White, W. L. (A), 213 S. DeKalb Street, Corydon.
Reynolds, H. C. (D.M.S.), 2027 Mandarin Ave., Des Moines.

Kansas

Ferrell, Hellen M. (A), 418 W. Main, Independence.

Kentucky

Johnson, A. B. (A), Crutcher-Starks Bldg., Louisville.

Maine

Turner, Cassie K. ( ), 104 Coyle St., Portland.

Massachusetts

Walters, Ethel (Mc), 675 7th St., S. Boston
Spaulding, Raymond B. (Mc), 280 Main Street, Hingham.

Michigan

Symmonds, Virgil C. (A), Tussing Building, Lansing.

Minnesota

Ketchem, Lavina A. (A), Essex Bldg., Minneapolis.

Missouri

Campbell, Frankie (A), 511 W. Pierce Street, Kirksville.
Campbell, Georgia (A), 511 W. Pierce Street, Kirksville.
Campbell, Mabel L. (A), 511 W. Pierce Street, Kirksville.
Cobb, Myrtle (A), 804 W. Pierce St., Kirksville.
Hain, Marion K. (A), Kirksville.
Halverson, Johanna (A), 208 E. McPherson Street, Kirksville.
Haviland, Philip E. (A), 411 S. Franklin St., Kirksville.
Hutchison, Caroline (A), 208 E. McPherson Street, Kirksville.
Johnson, Fred E. (A), Acacia Club, Kirksville.
Jones, Charles W. (A), 411 S. Franklin Street, Kirksville.
Keithly, Rufus E. (A), 404 E. Pierce Street, Kirksville.
Millay, D. L. (A), 210 S. Franklin St., Kirksville.
Mills, Leonard W. (A), 502 S. Franklin Street, Kirksville.
Neumann, John J. (A), 301 S. Main Street, Kirksville.
Popplewell, James H. (A), 608 W. Jefferson Street, Kirksville.
Snyder, Glenn H. (A), 601 S. Osteopathy, Kirksville.
Story, Emery G. (A), Union Trust Building, Carthage.
Wilson, Margaret M. (A), Green City.

New Jersey

Arthur, Eleanore M. (Mc), 114 S. Illinois Ave., Atlantic City.
Dowell, Robt. T. (A), 29 Hamilton Street, Paterson.

Ohio

Betts, William E. (A), Delaware Springs San., Delaware.
Butler, Ruby ( ), Jefferson.
Dersam, Kathryn E. (A), Foulk Block, Chillicothe.
Rench, Leonard R. (Ch), Euclid Building, Cleveland.
Shook, R. L. (A), Huntington Bank Building, Columbus.
Stokey, Laura E. (A), 949 McKinley Avenue, N. W., Canton.
Streight, Nettie (S.S.S.), 105 W. Mechanic, Wapakoneta.
Wright, Lottie E. (A), 312 E. Main Street, Massillon.

Pennsylvania

Cole, Julia M. ( ), 2602 N. 12th Street, Philadelphia.
Easton, Melroy W. (A), 18 State Street, Oil City.
Harden, E. E. (A), 313 S. Main, Butler.
Arthur, Alexander F. (Ph), Markle Bank Bldg., Hazelton.

Texas

Smith, Mary Jodie (So.), Cotton Exchange Bldg., Mineral Wells.

Utah

Houghton, Alice E. (A), McIntyre Bldg., Salt Lake City.

Washington

Porter, Claude A. (L.A.), Warren Morse Bldg., Port Angeles.

Canada

Pelton, R. J. (D.M.S.), Somerset Building, Winnipeg, Man.

CHANGES OF ADDRESS

Bailey, M. W., from Majestic Bldg., to Empire Bldg., Denver, Colo.
Bell, DeLano H., from Little Rock, Ark., to Hennen Bldg., New Orleans, La.
Benning, Lillie M., from Washington, D. C., to 610 South Western Ave., Los Angeles, Cal.
Callahan, J. L., from So. Bend, to Ben Hur Bldg., Crawfordsville, Ind.
Cole, J. B., from Haden Bank Bldg., to Exchange Bank Bldg., Columbia, Mo.
Curry, Ralph E., from Farmer City, to Lincoln Bldg., Aurora, Ill.
Horning, Jas. E., from Lethbridge, to McLeod Bldg., Edmonton, Alberta, Can.
Jayne, C. O., from DeSota, Mo., to Paragould, Ark.
Losee, Chester D., from 201 Main St., to 225 State St., Hackensack, N. J.
Lynch, F. J., from San Luis Obispo, to 1003 State St., Santa Barbara, Cal.
McAnally, Florence I., from Chicago, Ill., to 2722 Webster St., Berkeley, Cal.
Mantle, Pauline R., from Workman Bldg., to New First Nat'l Bank Bldg., Springfield, Ill.
Musick, Augusta P., from Securities Bldg., to 3112 Woolworth Ave., Omaha, Neb.

How I Treated My Own Child

(NAME TO DOCTORS ON REQUEST)

The Dionol Company,
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Dr.————————.

Another Case

Philadelphia, Pa., February 8th, 1921.

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Dr.————————.

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